DESIGN FOR GROWTH

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By DEAN RICHMOND

The story of
National Gypsum Company
in commemoration of its
35th Anniversary

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INTRODUCTION

by BRUCE BARTON

SOME YEARS AGO I happened to run across a newspaper interview with Donald Alexander Smith, one of the greatest, perhaps the greatest, of builders of Canada. Born in England, he migrated as a very young man to work as a clerk in the Hudson Bay Company. He rose to the top of the company and became a leader in every phase of the development of the Dominion. He died in London at the age of ninety-four.

The interview which interested me took place when he was well along in his eighties. The reporter asked him: "Sir, what one thing about human life has most impressed you?" To which Donald Smith replied tersely: "The brevity of it."

This year marks the thirty-fifth birthday of the young National Gypsum Company. Thirty-five is no great hoard of years to many of us; nor indeed to many of the men who started this company and who are still guiding its destiny today. Yet I wonder if we shall ever see another similar period so crowded with change, so packed with unique and amazing benefits for the American family.

In this brief span, here are just a few of the things which have come to be and they are all miracles: Radio . . . from nowhere to full-fledged high-fidelity and stereophonic sound. Television . . . from nowhere to full-color on a twenty-four inch screen. Not just a chicken in every pot, but a sleek and powerful modern automobile in every garage . . . and most of them two-car garages at that. Regular passenger travel by magic carpet . . . the commercial plane. The emancipa-

tion of the common man through labor-saving machinery, and trucks, and tractors and diesels to do his heavy work for him. And the freeing of his wife from her drudgery through automatic washing machines, deep-freeze units, electric dishwashers, garbage disposal units . . . electric appliances, in fact, to handle every household chore. Plus canned goods and frozen foods and supermarkets and shopping plazas.

Most of all, see what has happened to our dwellings themselves. Automatic heating and air-conditioning. Sound-conditioning to quiet children's rooms and recreation areas. Insulation to keep our homes warm in winter, cool in summer. Outside finishes impervious to sun and wind and weather. Literally hundreds upon hundreds of brand new materials to make the home safer and stronger and cheaper to build. So much so that even the newly-married couple now thinks, not in terms of renting, but of owning their own home from the start. Truly—by the standards of only thirty-five years ago—witch-craft!

It has been said that every great institution is the lengthened shadow of a man. In the National Gypsum Company that man is Melvin H. Baker. For more than thirty-five years, it has been my good fortune to have Mel Baker as a friend. Never once in all these years . . . in good times or bad . . . have I known him to waver in his bull-dog faith in the glowing future of this country. With Ralph Waldo Emerson, he would say: "This time, like all times, is a very good time, if we but know what to do with it."

It is apparent now that the National Gypsum Company has known what to do with every situation and under every condition. Its philosophy is best expressed, I think, in this excerpt from one of its own messages to its customers:

"*A successful man once said, 'Give me people who are discontent with things as they are. These are the ones who forge ahead by reaching out for tomorrow.' At the National Gypsum Company we try to be such people. First by looking hard at our products and services. Then, by asking: 'How can it be done better?" This is* planned *discontent. It is born of an honest belief that men with their eyes to the future can always stay a step ahead of tomorrow.*"

AUTHOR'S NOTE

HERE IS A TRUE STORY of an industrial romance of legendary proportions. It is literally a geography lesson in industrial expansion. More than that, it is a tale of how men of vision, faith and courage spanned the nation with a network of plants—60 of them in all. And ships . . . and mines . . . and quarries . . . but most of all, people. It is a human account of struggle and victory against almost unbelievable odds.

National Gypsum Company has been on my "beat" as a financial writer for The Buffalo Evening News for many years. Over these years I developed a keen interest in this unusual business. It was heightened by my personal acquaintance with many National Gypsum men who participated in the creation of this company's history.

With the approach of the company's 35th anniversary, I conceived the idea of a book that would be appropriate on the history. The officers of National Gypsum agreed with my idea. The anniversary will be observed August 29, 1960.

This is not the recitation of the happenings of mere years alone. Rather, it is the record of an American enterprise and its fabulous growth.

The files of the company were made available to me and I was given a free hand to write the story of the company as I saw it. Because of the difficulty of including the complete theme in the text of the book itself, the reader will find other material of significance in the Appendix.

It is, of course, impossible to relate the life of any company in human terms without the cooperation of many

people. To name all those who rendered invaluable assistance is not practical. But I feel that a word of special thanks should be given to a few men without whose aid this book would have been impossible. These include Board Chairman Melvin H. Baker; President Fred A. Manske; Vice Presidents William M. North, Charles E. Masters, Dean D. Crandell and Melvin F. Cerruti; Treasurer Walter S. Corrie; Secretary Douglas B. Littlewood; Industrial Relations Director Charles H. Dwyer; Public Relations Director Richard D. McCarthy, and retired President Lewis R. Sanderson.

All phases of National Gypsum's history are included. The National Gypsum story is not concluded with the closing chapter of this volume. As the book goes to press, new expansions to meet the demands of a growing America are being planned.

DEAN RICHMOND

Buffalo, New York
August 1, 1960

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Chapter One

"There is a power mightier than the armies of men; it is an idea whose turn has come."

VICTOR HUGO

THIS IS A STORY of men of vision and little money who parlayed an idea and a strange rock into a quarter-of-a-billion-dollar industrial enterprise through charting a course that to many seemed foolhardy when considered by ordinary business standards.

That they managed to survive at all is a wonder. That they succeeded in a scant 35 years is a modern-day industrial marvel.

They had no one to guide them. There was no pre-cast plan laid down by generations of successes and failures to follow. They had to be captains of their own destiny. Truly, theirs was a story they had to create themselves on the pages of American enterprise. Adversity, setback after setback served only to light their path a little more brightly. They dreamed tall dreams and made them come true.

There was heartbreak and despair aplenty. But they only strengthened the muscles of abiding faith in their idea, their master plan.

This, then, is an account of the National Gypsum Company. It is a tale of daring and risk. Actual survival was at stake on more than one occasion.

Men's minds were to be sorely tried. Time and again the gloom peddlers pecked away at the vision of the founders of

National Gypsum. Through it all the design remained on the horizon. It was to come alive and be brought to fruition in the hot fires of competition.

Creativity and a dash of showmanship would play dramatic, starring roles. There would be a single sale that probably saved the company from oblivion. And, all this would be accomplished in the most difficult times that ever challenged the nation.

The odds against survival were prohibitive in the minds of the outsiders. But to men with faith in their plan, growth was certain. Defeat just didn't rhyme with faith.

As Fortune magazine once put it: "The company's entire history is a record of a remarkable instinct for growth."

This growth—the chronicle of the National Gypsum Company—was created in the fertile minds of three men, Joseph F. Haggerty, Clarence E. Williams and Melvin H. Baker.

But who are these men?

For one thing, each had built lean, hard competitive muscles, honed to a fine edge through long years of tough experience in the building materials industry.

Joseph Haggerty had been a vice president of the old Beaver Products Company of Buffalo, a pioneer of wallboard. Haggerty learned his lessons the hard way with Beaver Products. The company failed.

Clarence Williams reaped the same harvest at Beaver Products as head of geological research. After Beaver Products folded, these two men joined the founding group of the Universal Gypsum & Lime Company of Chicago. National Gypsum later was to acquire this company in one of the boldest moves of its early history.

The third member of the triumvirate, Melvin Baker, had done his undergraduate work at Beaver Products, too, rising to the position of national sales manager.

The single failure of which these three men were a part served only to instruct rather than defeat them. They believed, as Thomas Huxley once wrote: "There is the greatest practical benefit in making a few failures early in life."

Baker learned the story of money, that was to play such

an important role in National Gypsum's ascendency, as a vice president of the American Manufacturer's Foreign Credit Underwriters in New York City.

The recitation of the story of any company assuredly would lack luster if some mention were not made of the early forces that molded the character of its principal leader down through the years. History, after all, is the story of people, their roots, their faith, their heritage. If there is to be a pattern for growth—as most certainly there always has been with National Gypsum—it is people who make it. Not the other way around.

Melvin Houston Baker came from hardy Scotch-Irish stock. It was in the back hills of eastern Tennessee that he saw the light of day for the first time on the tenant farm of his impoverished parents. Besides walking five miles daily to a one-room school house, he was required to do a man's work on the farm. His father was a stern, deeply religious man and it was natural that the family spent most of their Sundays reading the Bible.

Mel Baker's father wanted young "Huse," as he was called in those days, to go to college but when the time came there was no money. Baker went anyway.

"The day my father drove me to college in the family horse-and-buggy he could afford to give me only $10," Baker recalls. "My step-mother reached down into her old purse and pulled out a 50-cent piece. It was all she had."

Life at Tennessee's Baptist-run Carson-Newman College was not easy by a long shot for the young farm lad. Of necessity, he had to earn his entire board and tuition by working as a full-time janitor, tending dormitory furnaces. The rooms were lighted by kerosene lamps.

The pressure of studying day and night and stoking furnaces proved to be a little too much for young Baker and after two years he failed to make the grade in college. But the nature of his achievements in later life was such that 44 years hence he received a Doctor of Law degree from this same college.

It was in this small college that Baker first learned to ask the question: "What of the future?"

The future was to be a rare concert of events for this man of cheerful yesterdays and confident tomorrows. And it was a fortuitous event that brought Baker, Haggerty and Williams back together again in Buffalo in 1925. Baker was in Buffalo on business when he ran across his former associates at Beaver Products by pure chance.

It was natural for the three men to sit down and talk over their years at Beaver Products. One thing led to another. Haggerty and Williams knew of Baker's capabilities as a salesman. They invited him to join them in formulating plans to make a new gypsum wallboard.

Williams had options on mineral rights for the mining of gypsum, later called "the underground treasure of Western New York," at Clarence Center, near Buffalo. Haggerty had done a lot of work on development of a new gypsum wallboard. True, his work had been of the most elemental nature and crude in concept. But the three men working together were to improve vastly on the initial formula.

In the tradition of the famed alchemists of medieval times, Haggerty had done his early experiments in, of all places, his wife's kitchen. The pressures on Mrs. Haggerty's good nature mounted as the messy experiments continued. First it was her egg beater that her husband used to mix his strange slurry. Then came the family oven.

The fantastic mixture was compounded at first of a number of common household items and gypsum. There was shredded newspaper to give the wallboard flexibility. The invisible wood fibers in the newsprint would serve this purpose, Haggerty reasoned.

Mrs. Haggerty's starch in the slurry would add a quality to make the mixture adhere to the outside paper liner. Frothed-up paper pulp would make it lighter.

Haggerty knew that the lack of these three qualities—flexibility, lightness and adhesion of the gypsum mixture to paper—were the biggest objections of the building trade to the gypsum wallboard then in existence.

He "cooked" his rare mixture in his wife's oven. That was the final straw. "Do your work someplace else," he was informed.

Haggerty, Williams and Baker by that time had joined forces. Baker had quit his job and abandoned a secure life to return to Buffalo permanently to plunge into the new enterprise. Haggerty was to be president of the company; Williams would be vice president, and Baker, secretary and general sales manager.

But the three men needed a place where they could conduct further experiments. Baker knew of a company that might be willing to let them use some space. It was the J. & A. Keller Machine Company, then located on Elk St. in Buffalo. It was in the basement of this plant that the trio continued the research.

"They worked in that basement day and night," Arthur P. Keller, now chairman of the Board of Directors of the Keller company, recalled not long ago. "I never saw anybody work harder than those men did. There was no letup because they knew they were on the right track."

And so they were!

The J. & A. Keller Machine people and many others were to share in National Gypsum's later prosperity through Baker's loyalty to those who helped the company in its infancy.

Later, the Keller company was to make all of the special machinery for National Gypsum's first plant. To this day the Keller family retains a substantial interest in the fortunes of National Gypsum. Attend an annual stockholders' meeting some year and you're bound to see at least one member of the Keller family there. It's their custom to offer a resolution commending the actions of the management during the year and expressing confidence in the company's future. No one has ever objected to it.

So it was with others. The Beacon Electric Company did the initial electrical work for the first plant. Both the Keller and the Beacon organizations have received many contracts over the years for work on other new National Gypsum plants.

And then there was the Manufacturers & Traders Trust Company. The Buffalo bank had faith, too, in National Gypsum in its early years and extended the company its

first line of credit. Its board chairman, Lewis G. Harriman, has been a director of National since 1942.

But the story is getting a bit ahead of itself. What of the temper of the era and the business climate the founders of National Gypsum proposed to test back in 1925?

People still thought sublimely that the Great War had been the war to end all wars. The recession of late 1920 and early 1921 was viewed as a natural aftermath of the war. The seeds of change in the economy—in a way of life—had been sowed and tiny shoots were springing up if one had the patience to search them out.

Indeed, there was a fine balance there to achieve between the old and the new. The "robber barons" of the 19th Century had had their day playing hob at will with the nation's economy. But in 1925 there was government machinery to curb monopolistic practices, restraint of trade and like evils that had festered the nation in past generations. However, the big machine was not well oiled. Business was being left pretty much alone as long as it adhered to a few simple rules. The idea of strict government regulation of the security markets was yet to flower. The concept of government controls still was over the horizon.

Vast and terrible changes in the country's way of life were yet to be wrought by the Great Depression. F. Scott Fitzgerald was spinning his wondrous tales of the youth of the jazz era, its recklessness and extravagances. It was in 1925 that one of his most famous novels, "The Great Gatsby," was published. Col. Billy Mitchell, an early and unheeded advocate of air power, was put on trial for insubordination in his criticism of the Army Air Service.

Rum-running bootleggers clogged coastal waters. Prohibition was having a tough time stemming the flow of illegal liquor. The frying of an egg on the summer-roasted pavement of a street in Washington made big headlines all over the nation.

While National Gypsum was going through its birth pangs, the world-renowned Delmonico's Restaurant, which had catered to the palates of the very rich for a century, closed its doors for the last time on August 19, 1925, to

make way for a new office building at Fifth Ave. and 44th St. in New York. Rogers Hornsby won the National League batting title with St. Louis with a phenomenal average of .403. Pittsburgh, in a sensational rally, captured the World Series from Washington after trailing three games to one.

Great Britain returned to the Gold Standard. Certainly, in 1925 this was a nation convinced that nothing could halt the rising tide of prosperity.

But for those of keen introspection there were danger signals cropping up here and there. The Harvard Economic Service cautioned in 1925:

"The result of easy money is that now both real estate and security speculation have proceeded so far as to raise a serious question as to how much longer they can continue at present levels."

World peace for the future seemed assured with the signing of the great Treaty of Locarno in that mid-year of the roaring twenties. The respected World newspaper had this to say of Locarno:

"The Treaty of Locarno would alone have made 1925 epochal. No single event since Versailles has ranked with it in significance or in its potential power for world composure and balance—for Locarno has made peace a reality."

Hitler had yet to be reckoned with.

The new capitalism in which a successful business had to be wholly responsible to its employes and its community was being dealt with in the minds of some economists but it had not become a reality. The muscles of the men in Washington had gained some strength but were flabby from lack of use.

Such was the climate in which National Gypsum was to take its first halting steps. There were many who told the founders they were headed for a heap of trouble. Their decision to start a new company was of dubious merit, they were advised. It ran counter to the massed formations of corporate thinking of the day.

The three men did not have a product to sell. They did not have a plant in which to make it. Capital was just something to dream about. In fact, the three men had few tangible assets of any kind.

True, they did have options on what they were convinced was a valuable deposit of high-grade gypsum at Clarence Center. And there was a titanic building boom in progress to tempt their spirit. As Baker recalled of the times in a talk before the Niagara Committee of the Newcomen Society in North America in 1954:

"In retrospect it was an ideal time to form a corporation with an unusually strong sense of responsibility to its employes, owners, customers and neighbors. Such a concern thus would be ahead of its time sufficiently to capitalize on the changes taking place, but not so advanced as to be a handicap."

National Gypsum was to be just such a corporation.

The founders were to use the changes then in process of evolution but they would not be wedded to them.

"Surely," they were convinced, "the impossible of today is the commonplace of tomorrow."

At first glance, the building materials industry they proposed to invade seemed an improbable field. There was a mountainous supply of building materials in the yards and warehouses of suppliers. Above all, the competition was well entrenched. It was turning out a gypsum wallboard, to be sure, but it was scorned by most carpenters and contractors for use in construction of walls and ceilings of homes.

"Too heavy," they objected. "Besides, it's brittle and chips at the edges too easily."

The National Gypsum founders were sure they had these objections licked. Moreover, they had faith in themselves. But they had no capital to build a plant.

Baker, the salesman, took the job of raising $2,000,000 for the first plant and the necessary working capital. With mounting weariness he made the rounds of the investment-banking houses. He got the cold shoulder everywhere.

"Sure there's a lot of money around," they said with an eye on the clacking ticker tapes. "But don't think for a minute people would risk their money in your scheme. It's too easy to make money in the market today."

Discouragement was at a peak.

"Then we decided to hire a professional stock salesman,"

Baker recalled. "He was supposed to be a 'cracker jack' but he turned out to be a flop as far as we were concerned. He didn't sell a single share of our stock."

Back the three men went to their cubby-hole office in Buffalo's Jackson Building. A new strategy was called for, they reasoned sensibly.

Baker came up with a scheme to hire a sales force of building product salesmen to sell the stock. The word went out and a force of five men was hired. They hit the pavements, their briefcases bulging with the story of the National Gypsum Company.

They made some progress but it was slow going. Enter the challenge of creative selling, the grand idea, outlandish as it might seem to the uninitiated.

The fire of imaginative genius at work was kindled. It was pure in its simplicity, bold in concept.

"Why not concentrate on selling stock to the owners of the expensive cars? Most of them have money to invest."

The unusual sales force went back on the road. They unfolded their tale to personal friends, building material dealers, industrialists, to anyone who seemed to be a "live" prospect.

Discussing the idea of creative selling in later years, Baker was to say:

"You will find that back in the history of every worthwhile institution, the turning point came through somebody doing a selling job . . . One, to sell, must believe. This is important. He must believe that his product is good for his customer. Finally he must have faith in his ability to sell it. Faith does not guarantee success but lack of it will lead to failure."

The struggle that ensued was one for mere existence. The crusade went on around the clock. The founders and their sales force ate, slept, lived and dreamed National Gypsum. Their confidence could not be shaken or swayed, for they had a long-range plan.

It was well calculated to eclipse the advantages enjoyed by some already well-established companies. That the $2,000,000 stock-selling plan was a success now is a matter

of history. Curiously, it was probably the first example in American corporate history of a company of such stature financing itself through the efforts of its own salesmen.

The remarkable design for the future called for growth. Just how this growth was to be achieved was spelled out in meticulous detail. The founders rejected the idea from the first of existing with a single plant. They decided against going it on a shoestring. There would be a safe margin of solvency, a pay-as-you-go policy.

Growth—and they were dead sure it would come—was to be within the framework of a specific pattern.

Consider for a moment, though, the market these men proposed to invade. First of all one single producer was manufacturing three quarters of all gypsum wallboard at the time. Another 25 or so companies were competing tooth-and-nail for the left-overs.

The formidable wall erected by the competition seemed to crack a trifle when the executives considered their lighter and stronger wallboard. Moreover, it was to be delivered to dealers at a cost no higher than that of the competition.

This was part of the story preached by the tiny force of salesmen. They were in reality evangelists, as every top-notch salesman must be. They had confidence in their product, confidence in their ability to sell it and a willingness to pound the pavements.

Time after time a dash of creative selling was added to the formula and once in a while a touch of sincere persuasion was needed. On one occasion while they were still selling stock, Baker asked a country banker if he and his directors would be interested in acquiring some of the securities. The banker resisted at first as did his directors. Then Baker tacitly suggested that National Gypsum would like to use the bank for the payroll deposits for the first plant.

The bank president was naturally delighted with the thought of additional deposits. After all, there were plenty of places to loan money out and interest rates were sky high. The bank president went into a directors' meeting to "sell" National Gypsum stock for Baker. Together, the bank group signed up for $25,000.

By this time the National Gypsum folks were ready to enter a new phase of their venture. They had their capital. Now theirs was to build a plant and SELL, SELL, SELL until their hearts were nearly eaten away.

The options on the mineral rights at Clarence Center were duly exercised and work on the plant got under way in November 1925. But again fate intervened as it was to have a habit of doing in subsequent years.

In building the first mine shaft, the contractor hit water. The shaft flooded. Despair reigned for a while. The only practical solution was to install a costly sleeve of concrete in the shaft. The bank balance dwindled. Capital was precious. Coincidentally, the mine-saving concrete—then only a word to National Gypsum—later was to be translated into the most astonishing expansion moves undertaken by the company in its first 35 years.

By June of 1926 the company was ready to plunge into the glutted jungle of almost unbelievably stiff competition.

But first, glance at the long-range plan that had been blocked out so precisely in the previous months. Its shape was sketched out in fine detail. That blueprint stands today virtually without change and is the pattern for still further growth now on the drawing boards.

The master design is flexible enough in its classic simplicity to be molded to the changing times in the future. Indeed, it is a philosophy for growth.

The plan then—and now—called for the acquisition of mineral deposits, mines and plants, all geographically located to permit shipment into the principal markets. Prices were to be no higher and the product at least as good, if not better, than the competition's.

"Audacious," those of little faith derided, "for a company with only one plant and not yet on its feet to be contemplating such a grandiose plan."

Time proved them wrong, of course.

The master design, however, was supported by some basic ideas. Take a close look and see how these concepts formulated more than a third of a century ago have been followed to the letter.

First, Haggerty, Williams and Baker decided, products used together should be sold together and manufactured together in sort of a department-store fashion.

Second, there was to be an undeviating policy of fair service to the company's dealers. Without doubt, National would not have more than 20,000 dealers today if it hadn't adhered strictly to this standard. National Gypsum's originators were positive that architects, builders and home owners would benefit from a diverse line of building products with a single manufacturer accepting full responsibility for their use.

Third, all products were to be manufactured under one brand name, Gold Bond. The idea was that as one product gained acceptance in the market place, its quality would "rub off" on other new products and so help to gain acceptance for them.

Oddly, the Gold Bond name came into existence as a result of an oversight—a happy one as things turned out. Originally the name Gold Seal had been decided on as the National Gypsum symbol and several carloads of printed material and bags and labels were prepared and actually shipped out. By chance a competitor noticed the Gold Seal name and informed National Gypsum that the name might be considered as an infringement of its own similar copyrighted designation, Golden Seal.

National Gypsum immediately ceased using the Gold Seal name but was faced with the task of turning up a new one in a hurry. It happened that this was a time when National Gypsum was offering $5,000 to anyone who could disprove the company's claims of the superior quality of its wallboard. The offer was printed on gold-colored paper resembling a corporate bond.

"One of our salesmen kept calling it a 'gold bond guarantee' of our quality as he made his rounds of the dealers," Baker recalls. "The idea caught on and the new trademark was created. Our $5,000 offer never was challenged, either."

National Gypsum always has been a creature of patterns, bold in origination, skillful in execution. It came to pass that these very patterns were to be in large measure re-

sponsible for the amazing habit of success of National Gypsum.

By following the early patterns, the founders reasoned—correctly as it turned out—the company would be able to employ its sales force more effectively. A single salesman supplying a full line of products would result in greater sales per man and better service to the dealer since a salesman thus could work in a small territory.

Personalized service, you can call it. It's something like the relationship between a doctor and his patients or a lawyer and his clients.

Still, the dealers that National Gypsum's salesmen were calling on after the opening of the first plant were somewhat apathetic. Sure, the salesmen-evangelists had a superior product. But the market was oversold and the dealers thought gypsum boards were all pretty much the same.

The dealers had to be convinced. So, the salesmen tied pieces of the new wallboard to the high, flat tops of their automobiles. The old model cars were a sight to see as they bounced over country roads with the new wallboard flapping on the roof.

At a dealer's yard, they would take the wallboard off the car and place it on carpenter's sawhorses. Then they piled ordinary window sash weights on the center of the wallboard until it broke in half.

"So what," a dealer might well have replied.

Then came the clincher. The salesmen hauled out the much heavier wallboard made by a competitor and suspended it on the same sawhorses. Surely, these heavy and stronger-appearing boards were stronger than this newcomer's.

"Go ahead. Start throwing the weights on this board," the National Gypsum salesmen said simply.

Sure enough, the competitor's board broke in half, too. But the new wallboard of National Gypsum had taken a third more sash weights than the old style board.

Another creative-selling device used by the salesmen was to whip one of the new wallboards up and down between them until it broke. Again, the National Gypsum board

came out on top when the same treatment was given to the wallboard made by the competition.

The word got around and soon the salesmen were signing up dealers at a furious pace. The foundation had been poured for a vast virtually-new industry. As Baker was to relate in a talk in 1949:

"Here you have living evidence of a great industry created and nurtured by the imagination and toil of salesmen, serving the people of our nation."

But what he told a group of Arkansas lumber dealers in 1951 really got to the heart of the company's policies established in those early years:

"In our approach to the future we should keep in mind the difference between need and demand. Need is the essential and demand is that which we create. One is status quo and the other is progress."

It's almost old hat to say that National Gypsum has never been satisfied with the status quo.

It wasn't long after the first plant went into production in that summer of 1926 that the unheard-of policies and on-the-spot demonstrations of the new company started to have a telling effect on the whole industry. In short, the competition had been shaken to its very roots. The conglomeration of dealers selling wallboard in a hodge-podge manner had resulted in price cutting between many miscellaneous outlets.

Now the founders of National Gypsum were well aware of the fact that gypsum wallboard was applied as walls and ceilings by the carpenter-contractor. They, in turn, bought most of their materials from the lumber or building-supply dealers.

Not so with wallboard, however. The makers of wallboard were peddling willy nilly, not only to building material dealers, but to coal yards, feed and grain stores, grocerymen, hardware stores and even junk yards. Sometimes a contractor could buy his wallboard from the manufacturer for the same price he purchased it from a dealer. Being comparatively new the product had not yet found its logical outlet for distribution.

The situation was chaotic, indeed. But the creative talents of the company were up to the challenge again. For this decision there would be no policy hatching at the level of top management alone. The company leaders decided to ask the legitimate dealers what policy should be followed.

"What strange manner of businessmen are these?" the business world questioned. "Who ever heard of asking dealers how to run a major part of your business?"

National Gypsum's answer soon became clear. The company was flooded with answers to questionnaires sent to dealers. The response was overwhelming.

The dealers were asked simply what they thought should be done to put the wallboard industry on a sound basis. How could there be a profit for all?

Some of the letters were scathing in their denunciation of the way the industry had conducted its affairs in the past. A coal dealer handling wallboard, for instance, would cut his price to get the business away from the lumber dealer. The junk dealer with nothing more than a shed for his operations would pare the price still further. And so it went. Nobody made any money.

From the thread of criticism in the letters, the National Gypsum people wove a new miracle distribution fabric that was to startle the industry.

Henceforth, National Gypsum would sell its products only through established lumber and building-supply dealers. Baker was to say later on that this was the wisest decision the company ever made. Time was to bear him out.

The policy was immediately successful. The dealers liked it. Moreover, the new plan of distribution later was adopted by the entire industry and has been followed ever since.

So now the National Gypsum salesmen had a firm dealer policy, designed to promote good will between all parties—the dealer, manufacturer, architect, carpenter, builder. They had their creative selling techniques. They had an improved product priced no higher than the competition's. But still another ingredient was needed.

The fledgling company knew it had a story to tell about its product and itself. Advertise, the management decided.

It would open still more doors, cement relationships with dealers and help to bring more of them into the fold, not to mention its effect on the carpenter and contractor.

"We believed, as we do today, that any firm has little legitimate reason for being in business and faint hope of staying in business if it has nothing worth saying about itself," Baker was to say in 1950 of this initial advertising effort. "Therefore effective means of communication become important."

The advertising campaign was launched—the first ever conceived for sending the company's wallboard business to the retail building material dealers. It was tailored not merely to sell wallboard. The ads would suggest that the public call on these dealers for its building needs.

Never could a big national advertising campaign on behalf of the dealers be more timely than it was then when the influences of many kinds were cutting the heart out of the dealers' business.

Strangely, many thought, the nationally-circulated and affluent Saturday Evening Post was selected as the vehicle for the campaign. In it were pictures of National's first 69 dealers.

"Why?" the doubters questioned, "advertise nationally when you have only one plant and sell in but a few states?"

Here again, National Gypsum replied, is concrete evidence that we are building for the future, not just for a fast dollar.

"Constantly before us was the fundamental idea as we saw it from the beginning," Baker related in an address in 1956, "namely to build a company that would manufacture a full line of wall and ceiling materials. And so, at high selling cost, we were paving the way for distribution of a group of allied products."

"And, too, we advertised because we were in competition for growth, for capital, for dealers, for good will and for personnel."

Thus, from the very beginning National Gypsum was flexing its muscles for a position of pre-eminence in its industry. Its salesmen had been given a new broadsword to lay

siege to the vast fortresses of the competition. The battle was being waged relentlessly. As Baker was to relate in a speech in 1953:

"Selling gypsum board, even an improved product, in the face of well-entrenched competition was, looking back on it, impossible. But through unceasing sales effort and plain dogged determination a market was created. After all, our economy is based almost entirely on created human wants rather than on necessities."

And so the niche in the armor plate of the competition began to widen. It wasn't long before the entire output of the initial plant was sold out regularly. The imagination of men had created something new. Know-how was starting to pay off in terms of productivity, jobs and security. Sales in that first year of plant operation, 1926, came to $390,039 and profit, $35,835.

Not bad for an upstart!

The company was on its way at last. Or so its executives thought. The fact of the matter is that they may have been too successful. Competition was miffed at this growing company which had invaded their business. They didn't like it by any means.

They were faced with the challenge of a superior product being sold at prices no higher than their own. It would be costly to convert their plants to produce a similar wallboard. Furthermore, the creative-selling of National Gypsum's sales force had become a gnawing thorn in their sides.

A devastating price war broke out. It was to last for two years—two years in which building was at a high level and a new company could rightly be expected to make great progress. It cannot be said that the price war which had been started by competition was directed at driving this aggressive newcomer out. But there were times when the founders weren't so sure.

National Gypsum had gone into the price war with sales in 1927 of $1,688,637 and it earned a handsome profit of $114,579. The grand plan was beginning to pay off.

But the price war was to change things. Just to stay in business, National Gypsum had to slice its prices, too.

Salaries were cut as an economy measure—even those of the founders. The situation called for drastic remedial measures.

One point was uppermost in the keen minds of Haggerty, Williams and Baker. They were severely limited in the markets they could serve. Even their stronger, lighter wallboard couldn't be shipped very far and still compete with other brands made in plants nearer other markets. Freight rates were the controlling factor.

Losses were starting to pile up. Resources were dwindling. The price war was forcing many another company to its knees. To top it all, the company was faced with $1,000,000 in patent suits which it could not meet.

The decision on a course of action was clear cut in the minds of the hardy leaders of National Gypsum. Survival was at stake again. True, others in the industry were failing because of the ruinous price war. But one of the basic tenets of the master plan sketched in 1925 was squarely on the line, too.

There was to be growth within a stipulated pattern. Already the company had added two products to the wallboard produced in the Clarence Center plant—gypsum lath and plaster. But these additional products hadn't been enough to turn the trick.

And so the word went out: Expand or die!

National Gypsum raised another $1,000,000 and a whole new plant was built at a community called Emery Junction, Mich. The community was so delighted at having a new industry that it renamed itself National City in tribute to National Gypsum.

The new plant, in turn, opened up vast new markets to the struggling company. It could now supply gypsum products to the Central West, a territory that had been closed to the Clarence Center plant because of prohibitively-high freight rates. Gypsum was now coming into its own.

But what is this strange and relatively soft mineral? It has been called "the rock nobody knows" because of its uncertain geologic origins. It can be ground up and boiled (calcined) to remove most of its moisture. And it is the only

natural substance that can be restored to its original rock-like state by the addition of water alone.

Known to man for thousands of years, it was used in the building of the Pyramids. It's in your toothpaste; it helps peanuts grow; and it is used to make "snow" in Hollywood movies. The Greeks used a form of gypsum in their temple windows. They discovered that the sun shining through it graced their altars with the effect of moonlight so they named it after their moon goddess.

By actual count, nearly 1,000 uses have been found for gypsum. But by far its biggest use is in the manufacture of wallboard—also called plasterboard or gypsum board—for the walls and ceilings of our homes. Mined much like coal in some sections of the country, it can also be easily quarried when it is close to the surface.

Coincidentally, a vein of gypsum runs right under National Gypsum's present headquarters office building in Buffalo.

Gypsum wallboard is made by sandwiching a core of wet plaster—ground gypsum and other ingredients—between two sheets of heavy paper. When the plaster core dries, the "sandwich" becomes a strong and flexible, fireproof building material, manufactured in colossal quantities on machines nearly a quarter of a mile long.

With similar machinery and the "rock of the moon goddess," National Gypsum operated both of its plants full blast in 1928. Dollar sales that year soared to $2,241,515, a whopping 32% increase from 1927 despite the depressing price war. But all was not well with the profit-and-loss statement. The company lost $4,619 that year.

One might think that with a ravaging price war crumbling company after company in 1928 that it would be a logical and prudent time for a manufacturer to pull in his horns and make out as best he could. But such was not the temper of the men of National Gypsum.

Expand again, they decided.

Accordingly, National Gypsum acquired the Luckey Lime & Supply Company, located in the rich dolomite section of Ohio. Actually, as the company pointed out in 1928,

"the addition of lime to the Gold Bond line had been planned for some time."

"The acquisition of the Luckey plant (closed in 1958 because it had become obsolete) is in line with the development program of the National Gypsum Company to produce a complete line of Gold Bond building products."

So read a portion of the company's announcement of the purchase to the press. Certainly this was an indication of the majestic plans for tomorrow that were whirling in the minds of the company's founders.

The new acquisition permitted the company to add a number of products to its growing line, such as finish lime, used for plastering; mason's lime for brick mortar and lime for agricultural use.

At this juncture adversity once more struck a blow at the young company. Haggerty died of pneumonia in May of that year. Williams had to retire because of poor health.

The directors acted without hesitation. They elected Melvin Baker president. He was to serve as president until 1952 when he became Chairman of the Board of Directors.

Baker now stood at one of the major crossroads that he was to encounter throughout National Gypsum's first 35 years, a period during which he has served as the chief executive officer for all except the three early years. Here was a man of 42 who was president of the nation's third largest gypsum producer. And yet the problems that faced him were of the sort that would try most men's souls to the breaking point.

The price war still was playing havoc with the company's profits. The two patent litigations were yet to be composed.

In essence Baker had but two assets that seemed to outshine all material properties of National Gypsum: His ability as a salesman and a deep and abiding faith in a lustrous master plan.

Faith is a very personal thing. You're not born with it. But you can acquire it. It's sort of a wonderful and awesome self-confidence in a concept, an idea. It uses the past and the present to capitalize on opportunities in the future. It doesn't let such things as master plans gather dust.

Those who have faith are masters of their destiny. Those who don't are cast in the mold of mediocrity. You can see it in a man's eyes, in quiet voices meant to command. The very young possess it. The very old often have lost it. To those of supreme faith, ill fortune is a puny thing. Adversity is only a challenge. The creed of faith has no room for the doubters, the skeptics, the non-believers, the fearful.

National Gypsum and Mel Baker—the men and women of the organization—always have been creatures of faith. They had their eyes glued to the future in 1928 and just 26 years later when Baker remarked in a talk:

"Growth in the past can be considered only a down-payment on the future. Specifically, what the accomplishments will be, no one can say. But as long as the American system rewards initiative, I predict that present levels are mere road signs to the future."

As 1928 faded into 1929, flames of speculative fever were curling ever higher across the nation. Police raids on speakeasies sopped up some of the wetness of New Year's Eve celebrations. The following day Franklin Delano Roosevelt was sworn in as governor of New York State. Texas Guinan, fabulous night-club hostess of the era, was greeting customers with her famed: "Hello, sucker."

In March of 1929 a brief but sharp tumble in stock prices shook thousands of speculators playing the stock market on heavy margins. The get-rich-quick craze was sweeping the country in epidemic proportions. Brokerage offices were jammed. A bootblack could recite yesterday's closing price of U. S. Steel or Radio Corp. of America as easily as he could tell you Babe Ruth's batting average.

Underneath the vast mountain of paper profits lay the story of vicious promoters, pool operators, "wash" sales and watered stock. But all of this skulduggery wasn't to become public knowledge until later.

The stock market receded again in September and the first part of October. The house of golden cards that had been built from the savings of uncounted Americans started to topple on Oct. 24, 1929. Nearly 13,000,000 shares were traded on the New York Stock Exchange that day.

The next day reassuring statements were issued by business and government leaders. President Hoover, for example: "The fundamental business of the country . . . is on a sound and prosperous basis."

The market rallied. Then came another break. On the morning of Oct. 29 there was an ominous air on Wall Street. The ticker tapes clacked out leisurely at first. Then the big blocks hit the tape. Sell, Sell, Sell! Thousands crowded the streets in and around the financial community in New York, many of them trying to raise more margin. Most of them were unsuccessful. The slaughter was on. It was "Black Tuesday," Oct. 29, 1929. A never-equalled 16,410,030 shares traded on the New York Stock Exchange that day.

The lives and fortunes and jobs of millions of innocents—who only then became fully aware of their blind lamb-like trust—were entwined in the dramatic collapse in stock values. The most disastrous depression this country had known had been signaled.

This, then, was the bleak picture that confronted National Gypsum as 1929 drew to a close. But National Gypsum, though still young, had stamped its footprints on the sands of American enterprise and the imprint was a deep one. It was to be mightier still in the tumultuous decade that lay ahead.

Chapter Two

"The only thing we have to fear is fear itself."

FRANKLIN D. ROOSEVELT
In his first Inaugural Address,
March 4, 1933

THE SUCCESS OF AN ORGANIZATION, as it is with any man, is made up of a series of seemingly little victories. A single such victory often isn't overly difficult to achieve. But when an organization of dedicated people is able to heap up a multitude of achievements, at first small to the eye, a mountain of success is abuilding. And when these conquests are chalked up in days of distress and agony, the accomplishment is all the more significant.

So it was to be for the National Gypsum Company in the doleful times of the 1930s. This was to be a decade of furious growth for the still-infant company. And, again, it was to be recorded within the framework of that master plan for progress that had been sketched so meticulously in the tiny office in Buffalo back in 1925.

As dawn broke on the inky gloom of the national economy of 1930, National found that prices in its industry had been stabilized. The patent suits had been settled. But the economic seas in which the company was to sail were stormy indeed.

Time and again the stock market staged a false recovery, only to sink lower after each spurt. A blanket of despair gradually started to engulf the nation. A vast section of the economy virtually disappeared.

Step by step the delusion was shattered that the great panic of 1929 was merely a speculative phenomenon, a temporary episode. A "Niagara" of prosperity propaganda poured from leaders in business and government.

"Business is fundamentally sound," they proclaimed for all who would listen.

But the toll was to continue in the steadily growing list of failures among banks, brokerage firms and manufacturing companies.

In 1930 the Equitable Life Assurance Society of the United States called attention to "the increasing mortality among the larger risks as the result of the post-crash suicides."

And the giant duPont Company referred to the following year as one of "no ordinary depression."

For National Gypsum the years of 1930 and 1931 were largely periods of stabilizing the hard-won gains of the earlier years.

Actually sales jumped in 1930 to $2,695,711 and the whopping loss of 1929 was transformed into a slim profit of $51,964.

"What is this?" cried the business world at large. "Here is a company doing better than in 1929 in spite of markedly curtailed activity in the business of building materials."

"How can we do this, too?" some might have asked.

Melvin Baker had the answer for all who would pay heed. He gave it freely in the January 1931 issue of Executive Services Bulletin, published by the Metropolitan Life Insurance Company Press.

"The answer, so far as we are concerned, is simple," Baker wrote. "Instead of pushing our sales department, we have made our entire business sales-minded. We recognized that business was approaching an era unlike any previous period. That meant, we believed, that our progress would depend upon our organization's recognition of the fact that we had one objective—sales—and that every one of us should approach our daily work sales-mindedly."

One of the brilliant sales-promotion ideas that evolved from this reasoning was a successful campaign to encourage

home and building owners to use National wallboard, insulation board and plaster to repair and renovate out-of-date structures. With new-home construction falling sharply, the campaign was a natural.

Research played a starring role in those early successes too, although these efforts naturally were nowhere near the scope they are today.

"All we had for our laboratory was a small room, maybe 12 by 18 feet, for our early work," recalls Dean D. Crandell, a 1927 starter with National, who directed the earliest research efforts and later on became vice president in charge of research.

The two-man research staff of the early years of necessity was forced to devote most of its time to the improvement of plant processes but there were some outstanding new products created, also. For instance, the National researchers in the early 1930s came up with the industry's first wallboard with a surface that looked like wood grain.

It was about this period, too, that Mel Baker solidified his ideas on the importance of people and depth of management in the National Gypsum family. In 1931, he wrote:

"The human element, we believe, is the greatest contributing factor in the success of any business. It is necessary, however, that the thinking of our people be sound and based on a clear understanding of their fundamental problems.

"We know that the efforts of a well-selected organization can be inspired and directed into a mighty force which will cause business to keep increasing steadily each year in spite of depressions and so-called business cycles. Regardless of any great improvement in general business, we have full confidence in the ability of our organization to carry through a real program of logical expansion."

That "logical expansion" was to come as a geography lesson to industry—a bold and mushrooming growth in new products and new plants and processes in some of the most troubled days in the history of the nation.

Faith in this growth? Sure, there was plenty of it and some to spare for the weak-willed. In one of his most-quoted remarks, Baker was to say of this faith later on:

"In the dark days of the early '30s, faith was virtually a means of exchange, a legal tender. I believe we had more of it than anything else."

As a matter of fact, National stood on pretty firm ground as industry went in those days. It had not allowed itself to become involved in heavy short-term loans, a mistake made by so many companies then. The cash position was strong. Working capital could support a substantial increase in sales volume. Manufacturing costs had been pared sharply.

Certainly, Baker was well aware of the risk that was involved in expanding—a risk of failure. But he knew, too, that it was a calculated risk.

"Back in the early 1930s, in the depths of the depression, my company embarked on an ambitious expansion program," Baker reminisced in a talk in 1953. "There were peddlers of gloom who said that we were heading into certain disaster. I freely admitted there was a possibility of failure but, at the same time, there was an opportunity to expand, to grow and to progress. I willingly chose to follow the bold course which, though uncertain, offered great hope for the future."

Authoritative business analysts subsequently were to say that National expanded more rapidly than any other company in America during the 1930s.

That it did so while a new army—the unemployed—was being recruited, factories were shutting their doors and those who had jobs lived in the penetrating fear that their turn would be next is a tribute to resourceful and aggressive management, a trade publication said in 1950.

And so the foundations had been poured for the prodigious growth of the 1930s. The year 1931 had been a good one for National. Profits multiplied more than five-fold to $276,991, even though sales were about the same as in 1930. The economy measures were showing up on the profit and loss statement.

Baker saw the answer to the depression in expansion and diversification—actually to create new markets. More dealers would be added and advertising expenditures increased to help promote sales. Baker himself—a man who has always

believed in the delegation of responsibility—hit the dealer circuit, calling on those who handled National's products as well as dealers in competitive building materials.

It was in August, 1932, that National Gypsum made its next expansion move. A month earlier F. D. R., in accepting the Democratic nomination for the Presidency in Chicago, had offered the nation "a New Deal for the American people." That same month the nation's economy touched rock bottom statistically.

National moved ahead anyway. It acquired the patents, name and good will of the Macoustic Engineering Company, a specialist in sound-absorbing plaster. A new field had been invaded—the marvel of acoustics, or the control of sound in places of business.

It was no willy-nilly decision that prompted this move. National reasoned that the field of sound control had tremendous potentials. Researchers gradually developed new sound-control products then, just as they still are doing today. But more of that later.

As so often occurs, the turning points in the history of a business are not necessarily the great mergers or the building of bright new plants. The true crises more often are the apparent little events that go unheralded in the chronicles of a company.

Take this case at one point in 1932 when the future of the company hinged to a large extent on a single sale. Home building, the company's principal market, had declined 75% in two years. The markets for the products of National's wallboard plants in Clarence Center, N. Y., and National City, Mich., were drying up at an alarming pace. There was even a chance that the plants would have to be shut down. The challenge of creative selling was summoned once more.

It happened that a Chicago group was planning a mammoth "world" Fair—Century of Progress they called it—to celebrate that city's centennial. The giant project would entail the construction of a good many large buildings. As a matter of fact, it was to be the largest construction job undertaken in 1932.

But a massive roadblock stood in the way of National's chances of getting some of the exterior and interior wallboard business for the development. It seemed that Rufus C. Dawes, who was planning the Century of Progress, was a good friend of one of National's competitors.

Nonetheless the order hadn't been signed so Baker decided to give it a try.

"I spent the first few days studying exposition plans, investigating their finances and talking to their architects," Baker once said. "I learned they needed another $1,000,000 to complete the Fair and they were having a hard time raising it."

Finally, after three days, Baker succeeded in convincing the contractor for the project to recommend use of National wallboard for inside and outside construction. A plan then was hatched to help the exposition solve its financial problems. National offered to supply the entire wallboard needs of the exposition, with payment to be made half in cash and half in notes.

Dawes naturally was enchanted with the idea but, possibly out of loyalty to his friend, he offered National only half of the business, insisting that his friend be given a chance to bid on the other half.

"I told him, 'No, either we receive the entire business (amounting to substantially more than $1,000,000) or the offer will be withdrawn,' " Baker replied firmly. "He signed the order."

The Century of Progress exposition opened on May 27, 1933. It was a big success and the notes were paid off when due at 6% interest. It was a big enough order to keep the two wallboard plants operating full blast for more than six months.

"It added a lot to the confidence and morale of our people," Baker remarked a while ago.

National was quick to capitalize on the value of this single order and in 1933 mailed a brochure to the trade, relating the latest success. It brought the company and its products into great prominence and had a tremendous, but difficult to calculate, advertising value.

With 1933 came, too, the ascendency of F. D. R. as President of the United States.

But fear expressed over the monetary policies of the nation had cast an appalling shadow across the country's financial and business community. Billions of dollars of capital lay idle. Mortgage foreclosures skyrocketed. Families doubled up by tens of thousands as young couples returned to live with the "old folks."

Withdrawals from banks, for hoarding, reached astronomical proportions. F. D. R. on Sunday, March 5, the day after his inauguration, proclaimed a bank holiday to stem the tide.

The government had stepped into the picture and in subsequent years would go, as one economist wrote, "far beyond any other schemes for Governmental controls of economic life attempted in the United States."

There would be crop restrictions, government handouts, pump priming, currency devaluation and other devices designed to revive the dying economy. Perhaps the most ambitiously-visioned of these programs was the ill-fated National Industrial Recovery Act, NRA, as it was called, passed by Congress as an emergency measure on June 16, 1933. It was aimed at controlling production, prices and trade-practice agreements through the establishment of codes for each industry.

National Gypsum cooperated fully with the government in the NRA program. Melvin Baker, in fact, led a group that spelled out a code for the gypsum industry and he was later appointed chairman of the Code Authority to carry it out.

Even though two years later the Supreme Court declared the Act invalid, it had its value. Plans then included in this code indicated the need for publishing uniform prices to each class of trade; methods for distribution and product standards are still legal and ethical practices in the industry.

Meanwhile, National Gypsum's mighty offensive was paying off in spite of the economic drubbing being taken by the nation. Profits in 1933 jumped to $272,751 and sales edged up to more than $2,000,000.

And so the order went out afresh: Expand again!

It was not a haphazard decision—expansion just for its own sake. Remember the original edict of supplying a complete line of products for the building industry?

National already had its line of gypsum lath as a base for plaster in residential construction. But it did not manufacture metal lath which is used in commercial buildings and finer residences.

It seemed that Bethlehem Steel had idled its metal lath Kalman Division in Niles, O. The plant was picked up at practically a give-away price in 1934. After all, building contracts in that year had slumped to a mere 29% of the 1929 level. There were plenty of plants to be had if one but had confidence, foresight and a bit of cash.

The first thing National did with the Niles plant was to toss out practically all of the metal-lath-making machinery. There would be new equipment to make an improved metal lath at competitive prices.

The job was a tricky one, but it was accomplished with dispatch and National had assaulted another new field.

The well-oiled machinery of growth which had been contrived nearly a decade earlier was functioning magnificently. Financially, the year 1934 was even better than the previous one.

Under similar circumstances it would be a strong temptation for many a company to sit back and consolidate its gains, particularly in view of the depression. But the National Gypsum organization was not of such a turn of mind.

"Without initiative, a man can never aspire to any great responsibility," Baker related later. "If you sit back and expect opportunities to come to you, you may have a long wait. You must aggressively seek them."

Certainly, there were companies that could be picked up for fractions of their intrinsic value. But the catch was that most of them were losing money.

There was one company, though, that National had had its eyes peeled on for some time. This company had been sorely tried by the price war of the 1920s and it was still in sore financial straits.

It was at this point that National decided to explore a new avenue of expansion—acquisition of an existing company by exchanging its own stock for that of the other concern. The Buffalo company's stock still wasn't listed on a major stock exchange but it was far more valuable than that of many of its competitors.

By 1935 National was manufacturing some 30 products for the building materials industry. But distribution was limited severely by the cost of shipping its lines into other markets. Plants in big, new markets were needed to help absorb the cost of advertising nationally, and to step up the sales pace.

Accordingly, National worked out a deal to acquire through an exchange of stock the big Universal Gypsum & Lime Company of Chicago, which had become infected with the contagious financial diseases of the times. At one clip, the fast-moving National Gypsum had added five plants to its expanding network and actually doubled its manufacturing capacity.

Curiously, Universal Gypsum actually was a bigger company than National. There were many who thought that finally the expansion-hungry executives of National Gypsum had bitten off more than they could chew.

Immediately, however, National poured about $1,000,000 into modernizing the five plants it had acquired, exactly ten years after its founding. It wasn't long before the plants were on a paying basis.

The acquisition annexed new gypsum plants in Rotan, Tex.; Ft. Dodge, Ia.; and Akron, N. Y., as well as a lime plant in York, Pa., and a since-sold plant in Orando, Va.

"It was the most important step we took during the '30s," Baker remarked recently. "It really put us on the map geographically. No one else was expanding in those days and the move gave us a lot wider distribution than we had ever had before."

It put National on the map financially, too. The company nearly doubled its profits and sales in 1935, one of the worst building years of the depression.

And it was during this era, too, that National forged one

of its most dynamic policies that to this day is paying regular extra dividends. National, of course, had realized in the very early years that the men who joined the company were creatures of faith. Otherwise they would have stayed with or joined the old-line companies.

But with the enormous mushrooming of the operation during the 1930s, a new concept in management had to be hammered out if success was to be assured. Thus, the idea of depth in management was spawned. A perpetual pool of able managers, set up in layers according to ability, experience and age, gradually came into being.

Take a glance at the impressive list of men who started with National in the early years. Many of them held minor posts and rose through the ranks to positions of preeminence.

In addition to Dean Crandell, a young Cornell University graduate chemist, there were men such as Walter S. Corrie, a 1928 beginner with the company, who became treasurer. And John W. Brown, a salesman in 1935, who ascended to the senior vice presidency. National "acquired" another major asset in 1936 when it picked up Atlantic Gypsum. Along with the company came Lewis R. Sanderson, then manager of the New York City plant, who in later years became president.

The year 1938 saw Charles E. Masters get on the National team. His wizardry with corporate figures led to the financial vice presidency of the company.

It wasn't just coincidence that all these men of great stature, along with many others of similar caliber, came to National Gypsum—and stayed. Baker is a man who firmly believes that the greatest asset of any company is the men who make up the organization.

"Investors have lost a lot of money by forgetting that a business is men—not buildings and machines, or a set of books," as he once put it in a talk.

He maintains, furthermore, that the job of making a business pay off is a good deal like commanding an army advancing into enemy territory. Each is an adventure into hostile dominions.

Fortunately, a business dominated by able men almost always possesses the power to provide good management. Only those who are conscious of incapacity surround themselves with "yes-men." Mel Baker puts it this way:

"It is with men that business success is won. No general could win victories with a weak staff. An able business leader surrounds himself with men who have ideas, daring and imagination—men as eager as the boss for success."

National always has been heavy on management—one team ready to step into the breach when the call goes out. In such an organization there is a driving force that actually creates leaders. It's more than mere incentive to be the boss some day. With a team concept, management develops faith in itself which makes for a whale of a lot of enthusiasm and visions of new goals.

Lump all these ideas together and you've got something that Mel Baker once called "a powerful force that insures growth."

That growth was to continue for National Gypsum during the 1930s.

In 1936 National acquired the Atlantic Gypsum Company, with major gypsum plants plunked down right in the Bronx, in the heart of the big New York City market, and in Portsmouth, N. H. With the deal, it also got valuable gypsum quarries and deposits in Nova Scotia. And for good measure there was a subsidiary company thrown in, the Craftex Company. Craftex was one of the early producers of water-thinned paints which have since made such great strides with the do-it-yourself fans. The paint business also meant that National had drawn a bead on another new field, another new product.

Typically, the plants National acquired during the 1930s were picked up at bargain-basement prices. Atlantic Gypsum was no exception, as Baker explained a few weeks prior to the actual acquisition:

"This business is available to us at an attractive price, representing only a small part of the investment by the original owners. No cash outlay is required."

He gave an example then, too, of the freight savings

effected by the purchase of the tidewater plants. At that time National's eastern-most plant was in Clarence Center. The freight rate to the Atlantic seaboard came to $4 a ton, an amount that was largely eliminated by the acquisition of plants in the heart of the new market. Repeatedly down through the years National was to duplicate such savings through the spotting of new plants to serve key markets.

The year 1936 was a monumental one for National Gypsum in another respect, too. Profits nearly doubled and crossed the $1,000,000-milestone for the first time. Sales skyrocketed to nearly $8,000,000.

That National Gypsum will go down in history as one of the outstanding success stories in the country's corporate history today is taken as a matter of course.

Naturally, there are many, many reasons for this accomplishment, not the least of which is the inherent faith of investors—large and small. Their confidence has been expressed repeatedly, starting in the days when the company's stock-selling salesmen were pounding the pavements to get the company started back in 1925.

There were to be perhaps no more shining illustrations of this trust in the fortunes of National Gypsum and its leaders than during 1937.

It was in that year that an unusual opportunity was presented to National that involved a new process for making fiber wallboard out of waste pine timber. National investigated the process thoroughly and was convinced of its superior merits.

There were no existing companies that might be acquired to make the new product. It would require a large brand-new plant.

The price tag for building and equipping such a plant: $1,500,000. True, there was money to be had then but time was a factor if National was to out-general the competition. Once more an alert stroke of master salesmanship with a dash of showmanship seemed to be the word.

Now, Baker recalled that he had a friend on Wall Street who might be able to help. He called him one day and asked if he might be able to arrange a meeting with some of

the top men in the major investment trusts in New York City.

"Of course the meeting can be arranged," Baker was told.

And so it was set for an evening in May of 1937 in the plush University Club in New York. Ten investment trusts were invited to send their executives and, surprisingly, Baker thought, all ten accepted.

As such affairs go, there was a lot of small talk during the dinner. Strategically, Baker waited until the dinner was over before broaching his subject: Insulation board.

Baker knew the value of brevity and his pitch was a short one—the opportunities for new capital that lay in the new insulation board.

The timing of the dinner meeting was letter-perfect. The nation was in the throes of a modest recovery. But what the participants didn't know was that it would be followed immediately by another slump in national output, though not as severe as the one following 1929.

The story related was a simple one. The man who told it used the precepts of a salesman-psychologist. He understood his audience's personalities, its dispositions, its likes and dislikes, as any salesman worth his salt must do. He was humble and, at once, convincing.

The money men of Wall Street were enchanted by the manner of this man who hailed from the provinces of upstate New York. They came to listen. They were spellbound. They bought—right on the spot. Baker had asked for $1,500,000 for the new plant. He got $2,000,000. Work on the new factory, located in the heart of the pine lands of Alabama, started immediately.

About this time, in 1937, Gerald Loeb of that great New York investment brokerage house of E. F. Hutton & Co. became interested in the future prospects of National Gypsum stock. Control of the company then was held by Baker and his immediate associates through ownership of the majority of a class B voting stock, later eliminated so that all stock became voting shares.

"Loeb suggested that new highways for growth and expansion could be opened up for us if we would agree to

split our stock and seek listing on the New York Stock Exchange," Baker recalls.

Listing of the stock on the country's biggest stock exchange would provide definite advantages to National and its stockholders.

There would be a ready market for the stock, a valuable asset in the sale of additional shares to finance expansion, and a point favored by investors. And distribution of the stock would be widened.

National decided to go ahead with the plan and the big securities supermarket in New York gave the green light for listing. No small achievement for any company.

"You know," Baker remarked the other day with a characteristic wave of his hand, "we weren't really interested in keeping control of the company. We wanted to grow and grow and we thought that was the best way to do it."

Subsequent underwriting operations for National Gypsum have been handled through another New York brokerage firm, W. E. Hutton & Co. One of the W. E. Hutton partners, Joseph I. W. Iglehart, has been a director of National since those days and has been a prime mover in its financial affairs.

The following year, 1938, was to be a monumental one, too, in the annals of National Gypsum. The company pushed westward with the acquisition of Best Bros. Keene's Cement Company in Medicine Lodge, Kan. Here Best Bros. operated a gypsum mill supplied by reserves of more than 30,000,000 tons of the purest white gypsum.

The Best family had brought the formula from England for making the famed Keene's Cement from gypsum. Actually this cement is an extremely hard, white plaster which is used as a background for setting ceramic tile and for making ornamental moldings.

Even today this plant still ships some 70% of all Keene's Cement made in the U. S. and Canada.

It was in 1938, also, that Mel Baker received a letter one day from the president of a bank in Savannah, Ga.

"This banker asked me to stop in and get acquainted if I planned to go South that winter," Baker reminisced a

while back. "He even offered to give me his car and chauffeur to use on a trip through Florida."

Apparently the Savannah banker had heard on the grapevine that National Gypsum had been studying prospects of building a new gypsum plant somewhere in the South.

"Well, anyway, I decided to pay him a visit," Baker continued. "And do you know what he had to say? He offered to finance a plant for us if we would build it in Savannah."

National wasn't interested in bank financing right then. But the Savannah banker did arrange for a group of underwriters to take $3,500,000 of National Gypsum bonds to finance the new plant.

"Incidentally," Baker smiled, "I didn't accept his offer of the car and chauffeur, either. I came right back to Buffalo to close the deal. And by the way that bond issue was sold out at a time when the New York investment houses said it couldn't be done."

As a matter of fact, the bond issue was fully subscribed the same morning it hit the market and a few hours later was selling at a premium.

Construction of the Savannah gypsum plant, completed in 1939, had another odd twist to it, too. Coincidentally, National had just purchased the Oakfield Gypsum Products Corp., which operated a relatively-new gypsum plant in Oakfield, N. Y., not far from Buffalo. Instead of operating it, National totally dismantled the plant and shipped it lock-stock-and-barrel to Savannah where it was used for the bigger plant being built there. By the way, when the Savannah plant was completed in 1939, it became the first gypsum plant to be built by the industry in the deep South.

National further improved its competitive position in a section of the South when it leased a big gypsum mine and plant in North Holston, Va., in 1939. In the same year it built a $1,000,000 addition to the New York City gypsum plant.

It was in 1939 also, that New York City played host to the world on a grand scale as it threw open the doors of the World's Fair in which National Gypsum products were used quite extensively.

There were plenty of smiling faces at the Fair that summer of 1939. Merriment was the keynote. The "name bands" of the day were playing "Chattanooga Choo Choo" and "My Heart Belongs to Daddy." The New York drama critics nodded approval of "Life With Father" and an airy work called "The Straw Hat Revue," with a couple of youngsters called Danny Kaye and Imogene Coca.

But for those who cared to listen, there was the crescendo of distant thunder for background music. Germany had seized Austria and Czechoslovakia. Italy had taken Albania and Ethiopia. Japan was in virtual possession of Manchuria and was at war with China.

The powerful democracies failed to take action after each of these conquests for fear of starting another world war. Appeasement was the byword.

But the Fascist states were not to be denied. The death knell of an era was sounded on Sept. 1, 1939, when a former Austrian drill corporal ordered his Panzer divisions and dreaded Stuka bombers across the Polish frontier in a mercurial dash to conquer. Two days later England and France declared war on Germany. Neville Chamberlain's "peace for our time . . . peace with honor" had melted under the onslaughts of Herr Hitler.

Before long the tunes of the Benny Goodmans and the Glenn Millers would be replaced by the ominous scream of artillery shells for millions of American youths. Before long the indomitable Winston Churchill would offer England nothing but "blood, toil, tears and sweat." The Great Depression would disappear in the vast call to arms of the 1940s.

And as 1939 drew to a close, National Gypsum found that it had experienced the most successful year in its still-brief history. But there would be still greater challenges ahead in the turbulent mobilization of the company's forces for war.

Chapter Three

"Neither London nor Abilene—sisters under the skin—will sell her birthright for physical safety, her liberty for mere existence."

DWIGHT D. EISENHOWER
In London, England,
July 12, 1945

IT HAS BEEN SAID by some economists that the Great Depression of the 1930s never ended. It was submerged gradually, but irrevocably, by a greater tide, the business of making war. Indeed, the no-man's-years between the Great Wars had ended as the decade of the 1940s flamed across the far reaches of the globe.

The United States was becoming the arsenal for democracy and soon was to be swept into the maniacal conflict. The Battle of England was on in 1940 as wave after wave of German aircraft dumped their tons of horror on the people of Great Britain. The Royal Air Force retaliated massively.

The Netherlands threw in the towel. So did France.

England—the democracies of the world, in fact—was faced with oblivion. Allied troops were forced across the waters at the evacuation of Dunkirk in that June of 1940.

But a glimpse of the spirit of invincibility of Great Britain came from Winston Churchill when he told England's House of Commons: "We shall defend our island whatever the cost may be; we shall fight on beaches, landing grounds, in fields, in streets and on the hills. We shall never surrender . . ."

Here in America a religious group offered a symbolic but

vain hope for peace by publicly beating a World War I bayonet into a plowshare. F. D. R. was elected to an unprecedented third term as President, with Henry A. Wallace as his running mate.

By that time Hitler's "Mein Kampf" had been replaced on the "best seller" list by the likes of "Kitty Foyle," "The Grapes of Wrath" and "How Green Was My Valley."

The Dow-Jones industrial average reached 152.80 in 1940, a far cry from the depression low of 41.22 in 1932 and the 1929 high of 381.17.

National Gypsum's stock hit a 1940 high of $12.25 a share after touching a low for the year of $5.50.

By any standards, National Gypsum was now well entrenched in its field. It had gone into the 1930s with three plants and at the start of the 1940s it had 16. The sales and earnings chart for the decade of the depression looked like the ascending trajectory of a Fourth of July skyrocket: Sales up fivefold; earnings 28 times greater.

With the clouds of war in Europe casting an ominous shadow over the nation, one might suppose that the men of National Gypsum might be of a mind to ride out the storm. Not so!

In the fall of 1940, with the ink barely dry on the Selective Service Act, National made another significant expansion move by acquiring Windsor Paper Mills Inc. of Newburgh, N. Y.

On the surface, the deal might not have seemed overly important to a casual observer. The paper-producing company cost National only $200,000. But, as Baker said at the time, it represented "the beginning of a program to manufacture all of the major items required in making our own products."

The idea was, and still is for that matter, to acquire or build facilities to make the company self-sufficient in its needs for the basic raw materials of its products. Vertical integration is the term used by the planners.

In this case its management had long known that National could save substantial amounts of money by making its own paper, which is used as a liner for gypsum wallboard,

lath and sheathing. Then, too, paper represented about half of the finished product's cost and the companies that supplied National could not guarantee uniform price or quality.

Doggedly, National took another expansion-integration step late in 1940 when it assumed control of the lime plant that had been operated by the Chemical Lime Company in Bellefonte, Pa. Typically, this plant was expanded immediately to provide what was by far the world's longest lime kiln, doubling its production.

National's appetite for expansion by now was voracious. While executives were closing the deal for the Bellefonte lime properties, others were closeted in hush-hush negotiations to pave the way for still another acquisition.

It came a few months later, early in 1941, when National exchanged stock to buy the $1,000,000 General Insulating & Manufacturing Company, which had rock wool plants in Alexandria, Ind.; Dover, N. J. and Dubuque, Ia., the latter now closed. It was another brand-new manufacturing field for the company.

Mind, National was no tyro in the rock wool business. Shrewdly, the company had learned the ins and outs of rock wool insulation by selling the products of other manufacturers for four years. It's nice work if you can get it, this business of having your competitors supply big doses of know-how.

"We now have a competitive position in all markets except for gypsum on the Pacific Coast and lime in the Middle West," Baker commented with justifiable pride then. "Our program will not be completed until those gaps are filled."

When you get down to cases, you'll find that throughout his career Mel Baker has been filling in these "gaps" in his company's assault on new pinnacles of progress. He's always had a lot riding on the future of National Gypsum and it's seldom more than a matter of months before he takes a notion to pile the stakes higher.

"Our ultimate goal?" he mused a while ago in the quiet voice of a proprietor-chief executive. "Why it's simple. We're going to keep right on expanding our major markets until we've covered the entire North American continent."

And he added with a twinkle in his eyes: "Maybe beyond that, too."

But back in 1941 the organization had knottier matters to thresh out. The thunder of cannon now was echoing around the earth. Young men who had won "cupie dolls" at the shooting galleries the previous summer now were shouldering heavier weapons. Camps were sprouting up across the nation to instruct the country's youth in the fine art of waging war.

Lend-Lease was born on March 11 that year. F. D. R. warned Germany and Italy that the U. S. Navy and our planes would fire on sight at Axis war vessels if they ventured into seas vital to the United States. "The rattlesnakes of the Atlantic," he called them.

It was 1:25 in the afternoon in the East when disaster struck. Pearl Harbor! Before long four-fifths of the world's population would be involved in the monumental conflict.

The following day President Roosevelt told Congress simply:

"Yesterday, Dec. 7, 1941—a date which will live in infamy—the United States of America was suddenly and deliberately attacked by naval and air forces of the Empire of Japan."

Congress declared war on Japan, climaxing what was termed "a decade of international immorality." In the next few days headlines across the land screamed of formal declarations of war against the nation.

Challenges were nothing new to the men of National Gypsum. Melvin Baker's reflexes were razor-sharp. He reacted with the dispatch of this brief but memorable telegram to War Secretary Henry L. Stimson on Dec. 8:

"THE MANAGEMENT OF THIS CORPORATION BELIEVES THAT BUSINESS SHOULD GO ALL OUT FOR QUICK, DECISIVE VICTORY OVER JAPAN, AND TO THIS END, THIS COMPANY'S RESOURCES, TECHNICAL KNOWLEDGE AND THE PRODUCTION AT ITS TWENTY-ONE PLANTS ARE AT YOUR DISPOSAL."

National Gypsum had gone to war.

If Baker ever wondered what would be the upshot of his

decision to offer the company's facilities to the government, he wasn't to be long in finding out.

Build us a gigantic bomb-loading installation, and operate it for the duration, the order went.

Baker thought he had just the man for the job to manage the undertaking, Lewis R. Sanderson, then manager of the big New York City gypsum plant. But would he take the assignment? Down to New York went Baker and broached the proposition to Sanderson.

"By the way, what do you know about bombs, Sandy?" Baker asked hopefully.

"Not a blessed thing but you can bet your life I'll take the job," Sanderson replied.

Anxious to get into the thick of things, Sanderson had just written a letter to a boyhood school friend from Des Moines, Ia., to see how he might be fitted into the wartime scheme. A return letter told him he would be needed and to be patient. The writer of that return letter, incidentally, was none other than Vice President Wallace. But by that time Sanderson had been tapped for his war job by Baker.

A date was set for a meeting in Washington early in February, 1942, for the signing of the contract between National Gypsum and Army Ordnance for the design, construction and operation of the bomb-loading plant. National was to be paid on a fixed-fee basis.

"You know," Sanderson recalled not long ago, "a lot of people said they wouldn't touch the job if they had been in Mel Baker's shoes. But you know Mel; his dander was up; there was a challenge and by golly he was going to tackle the job."

The meeting in an office in Washington started off on an austere note. As lawyers are trained to do, they started pouring over the fine print in the contract and asking questions. It was slow going.

"Well, finally Mel stood up and called a halt to everything," Sanderson smiled in recollection. "He told them firmly that 'there's a war on. Let's forget about dotting the i's. We're in this thing together.' "

The tension was broken. The contract was signed.

Sanderson paused in his reminiscences, pulling up his ramrod-straight frame. He enunciated with machine-like precision, pausing after each word for emphasis.

"I tell you Mel Baker sees the big picture of this company and this country. He . . . built . . . this . . . company . . . by having foresight and plenty of guts."

Sanderson's clenched fist hit an arm of his chair after each word as he continued:

"So many, many opposed him—told him he was wrong. That's been the way—the story—of his whole life. This company is here today to prove the others were, oh so very wrong."

But back to the war days. Army Ordnance gave National Gypsum just a year to get the plant into production. It was to be built on a tract of 18,500 acres, about 20 miles from Waco, Tex. Peaceful country, dotted with cotton farms and cattle ranches. Bluebonnet, the plant was to be called, oddly enough for the state flower of Texas.

The job confronting Sanderson was a herculean assignment. He knew nothing about building such a plant, much less knowing how to operate it. But he did know how to organize people, pick the right man for the job at hand.

Time was of the essence. For a nucleus Sanderson had a hand-picked group of National Gypsum production and financial experts.

On his first trip to Texas, Sanderson stopped overnight in key cities, where National sales offices were located. Help-wanted ads had been inserted in local newspapers and the applicants were on hand at each stopover.

And then a personnel office was set up in a Waco hotel and a design office in an old garage. The furious pace was stepped up. Some went to inspect similar plants elsewhere. A firm was engaged to design the plant. Then a general contractor. Pressure mounted. Nerves were shredded.

Besides the immense plant buildings, a virtual city had to be thrown up almost overnight. There would be a water system, a reservoir, 40 miles of railroad track, 60 miles of paved roads, a sewage-disposal plant, utilities, housing for the 6,000-plus workers who would operate the plant, ma-

chine shops, a laundry, a dry-cleaning plant. A 400-man force to guard the plant had to be hired. And 100 of them had to be able to ride the range on horseback to patrol the far-flung outposts of the plant. Texas cow-pokes would do the job nicely.

And there had to be a new hospital, a 350-man fire department with full equipment, a legal department.

At first, some $25,000,000 of government money was poured into the undertaking. Then another $5,000,000. Then another $10,000,000 or so. A staggering total of 10,000 workers were employed on the job during the peak of the frenzied construction pace.

Quite a man-size order to fill in a single year. But again the genius for getting things done in the National Gypsum organization paid off.

The plant went into initial production in October, 1942, about eight months after the contract was signed. No other government-owned plant of that size ever was built and placed in production faster.

The plant design called for production of 50,000 100-pound bombs a month in the early days. It actually produced five times that number.

The men in Washington were astonished.

Show us, they demanded. And so they came and they saw and they learned.

In essence, the production records that the plant sent toppling were nothing new to the hard core of National men who were largely responsible for them. After all, Sanderson had been in the gypsum business since 1914 and mass production techniques are a must in that field.

In addition, the plant's production superintendent, Frank Crowley, and its director of manufacturing, Keith Waugh, were from the National school of hurry-up production.

What the unheard-of production rate boiled down to was the simple application of mechanization. Call it automation, if you will. Naturally, this cut the plant's manpower needs, and coupled with the sharp pencil of controller Walter S. Corrie, Bluebonnet chalked up a cost record comparable to any similar plant during the war.

One might imagine that all this was accomplished at the expense of safety precautions. After all, handling huge quantities of TNT isn't quite like operating a big gypsum-board machine. But the lives of the workers of Bluebonnet were a lot safer on the job than they would have been at home . . . or crossing a street. The plant never had a fatality during production operations.

Word of the installation's hustle and top-notch safety record got around top military circles in Washington. Before long they were naturally turning to Bluebonnet whenever a rush order for munitions came from the battle commanders.

First there were the 100-pound bombs . . . then 500 and 1,000-pounders . . . and demolition blocks and anti-personnel parachute bombs and 105-millimeter artillery shells.

You might wonder what other role a building-materials manufacturer could star in to help get the nation on a war footing. Well, as far back as 1940 National Gypsum's well-oiled production machine started supplying the government with building materials to help house the millions of servicemen who would soon trade their homes for military cantonments.

You could tuck National's military business in your back pocket in 1940 but the moment the U. S. entered the war, demand for building materials skyrocketed. Military business was accounting for 40% of sales right after Pearl Harbor and was headed higher.

Army camps, naval stations, war factories, storage depots, houses for war workers all had to be built in double-quick time, virtually all over the world. And there just wasn't enough lumber and other building materials to go around.

National's researchers spotted the shortage in a trice. Revolutionary gypsum developments were forged in the fertile minds of these men who were used to thinking about tomorrow.

One of these products was a roof plank, made of two, three or four sections of gypsum board, laminated to form a husky, fireproof cover. National used it first on the Bluebonnet Ordnance Plant and it worked out so well that the

government picked up the idea for all similar construction.

The list of National products that went to war is a long one. The four lime plants converted for wartime played stellar roles in dozens of major activities; rock wool insulated precious cargo ships from the North Atlantic to the South Seas; a specially-developed casting plaster helped to give many vital metal parts a smooth complexion, doing away with a lot of machining.

National's metal-lath plant in Niles, O., really rolled up its sleeves, too. Steel, of course, couldn't be spared to make metal lath for construction purposes. Gypsum had won that job.

The idea of an idle factory was intolerable to the capacity-minded company. But it wasn't long before the plant was enlisted for service. Project: Convert to production of portable landing fields that can be assembled in a mere six hours and be able to take the pounding of B-17 Flying Fortresses.

In course of time these travelling airfields—Niles made six of them a month—were familiar sights to natives from the jungles of Guadalcanal to the sands of North Africa and the wastes of Alaska. Some of them even were assembled under enemy fire.

A National sales representative then in service once took time out to pencil this note to the company:

"I examined the tag on one of those mats and—you guessed it—'Manufactured by National Gypsum Co.'. Just like a letter from home."

That "letter from home" was on a quarter of a million tons of steel made into landing mats by the plant in two and one-half years of operation.

The Niles plant had another war job, too, the production of metal acoustical units to help deaden the deafening roar of airplane engines being revved up in test cells.

National didn't make a bundle of money during the war years by a long shot. Normally, it did its biggest business in supplying the residential construction field. But during the war private building was practically at a standstill. And government orders for building materials gradually dried up as the need for temporary construction tapered off.

Then, too, taxes took a bigger bite out of profits and other costs were on the upswing. Gypsum ore couldn't be shipped from the quarries at Dingwall, Nova Scotia, to the eastern plants. The company's freighter, the "Melvin H. Baker," had gone to war and was sunk in an encounter with an enemy submarine.

Nonetheless, sales held up on a fairly even keel during the war. True, growth had to be shelved until the enemy was licked. But what of the postwar period?

Reconversion of the plants posed no great problem since the output of most of them was merely diverted to wartime uses, with relatively minor modifications.

Indeed, the time had come to dust off the cornerstones of growth on which the structure of the company had been started back in 1925—acquisition of mineral deposits, mines and plants, all nicely spotted to serve designated markets.

It was the summer of 1943 when Baker started ruminating on what postwar America might hold for National Gypsum.

Home building naturally had been at a low ebb during the depression and non-essential construction had been halted during the war. Families had doubled up during the depression to scrimp on expenses. They were doing it again during the war by the hundreds of thousands.

Wartime marriages—5,000,000 of them—were part of that picture and would swell the demand for building materials, and the need for repair and modernization. The pinch had been put on construction of new schools, hospitals, stores, offices, churches and many other types of structures.

Surely, the management reasoned, this breath-taking pent-up demand for construction must be near the breaking point. Furthermore, a tremendous dam had been erected against the nation's purchasing power during the war. With the cessation of hostilities, it would burst its confines—unreasoning, clamoring, insistent.

"We must have a detailed postwar plan with specific objectives outlined to put us in a position to meet these crying needs," Baker concluded.

And so a Postwar Planning Department was established. Markets were studied. Population shifts were examined. Potential sites for new plants had a going over. Expansion and updating of existing plants came in for a close look. New products were researched.

Finally, the first report on the voluminous survey was made. It called for a 60% increase in productive capacity with corresponding boosts in sales and earning potentials.

"Not enough," Baker commented impatiently. "Make it a 100% increase."

And so back the planners went to revise their estimates upward. An initial outlay of $4,000,000 was mandated just for the existing plants and the overall bill from the end of the war until 1950 hit $50,000,000.

"To some, these plans may seem bold, but we believe the opportunities justify them," Baker remarked in a talk early in 1945. "Our plans are based on a conviction that the postwar years will present the greatest opportunity in history for building—all kinds of building—homes, commercial, industrial and modernization."

And, he added in that address, that "some time in the early postwar years we expect to double our sales over the 1939 level of $13,021,871."

Pessimists were a glut on the market in those days. They foretold of mass unemployment, powerful communistic forces that would alter our way of life, economic ruin and countless calamities. But they discounted completely the human element, the ways of the nation's builders and confirmed optimists.

Moreover, Baker refused flatly to settle for less than his doubling of capacities, sales, earnings and assets for the postwar five-year expansion blueprint. As it turned out, the demand for building materials had been considerably underestimated.

And so the postwar blueprint was finalized, stamped "top secret," and tucked away until peace became a reality.

The allied armies were thrusting deeply into the lands of the Axis in the early months of 1945. Victory in Europe could not be far off.

It was on a spring day in that year that a news story led off with this succinct report that stunned the nation.

ARMY-NAVY CASUALTY LIST

WASHINGTON, April 13—Following are the latest casualties in the military services, including next-of-kin.

Army-Navy Dead

ROOSEVELT, FRANKLIN D., *Commander-in-Chief;* wife, Anna Eleanor Roosevelt, *The White House.*

The common people on the streets refused to believe the news. Then they had to. For no longer would they hear the radio voice of one of the chief architects of victory. Gone were the "fireside chats" . . . "My friends . . ."

The fruits of victory had been denied him. That victory—V-E Day—came on May 8, 1945. But in the Pacific mere boys who had barely started to live were dying miserably on the sun-scorched atolls.

And then man invaded the sacred provinces of the cosmos. It was early in August of 1945—the A-Bomb of Hiroshima . . . then Nagasaki.

"The war situation has developed not necessarily to Japan's advantage," Emperor Hirohito informed his people on August 14.

The Bomb had paved the way for the most monstrous understatement of all time. V-J Day had arrived, a day when a joy-maddened world saw the grotesque mask of war ripped from the face of the earth.

The time now was ripe for polishing up the postwar expansion blueprint. Millions of married veterans were returning home from the far corners of the globe. And marriage bureaus again were doing a land-office business. An Army survey in 1945 showed that at least 1,300,000 former G.I.s planned a trip to the altar within a year.

The Bluebonnet Ordnance Plant was in process of being shut down, releasing Sanderson for another assignment. His job: To build an organization of engineering personnel who would virtually reconstruct the company's existing plants, and engineer new ones.

"New plants . . . new additions . . . new machinery . . . new manufacturing techniques . . . new cargo ships . . . and new quarries and mines."

That's the way Baker sized up his plans to stockholders in his report for 1945.

First in importance came a gigantic new tidewater gypsum plant in Baltimore. The Kimballton Lime Company in Virginia had been purchased in 1944 and there would be a huge new plant erected there, too. A rock wool plant in Mansfield, Mass., (since closed) was acquired in 1945. And then a paper mill in Garwood, N. J.

The terrific expansion pace was stepped up. Three 10,000-ton cargo ships were acquired. Another paper mill, in Kalamazoo, Mich., was added. A new gypsum quarry was opened at the Fort Dodge, Ia., plant. The Portsmouth, N. H., gypsum mill, leased to the Navy during the war, was returned to production and expanded.

Regularly, the call went out for speeded-up production in all of the plants. The imaginative designs of the new Engineering Department were creating new processes to substitute machines for back-breaking labor.

"Baker the Salesman" was now "Baker the Beseecher," pleading, cajoling, reproving, urging greater production.

Now, Baker is a man with many talents for getting a job done correctly and speedily. One of his favorite bits of diplomacy is to pit a man against himself, rather than against the boss.

An example arose one day shortly after the war when a plant operator was in his office discussing production problems.

"I wondered how I could get his production still higher than it was," Baker reminisces. "Well, I decided to offer him a bet of $1,000 that he couldn't raise the speed of his board machines by one third. He told me flatly that he would be back to collect that $1,000 at the end of the year. And he was. He got another $1,000 the next year, too, on another wager."

One of Baker's closest associates describes him as "a man who knows when to spar, when to prompt, when to exhort

and also when to inspire and infuse his spirit of faith in others." And he can do both equally well. Like any creative leader, he is a sort of "management needler," but is just as adept at soothing ruffled feelings with a few appropriate words.

He's been convinced from the start that a business can never be larger or more successful than the organization of people who make it up. His associates say he deplores the makeshift and has a deep-rooted loathing for the status quo.

He's dead sure his own company is headed for still greater things if people will just work together as a team to bring them about. To this end, he makes a regular point of keeping management on its toes through well-timed reminders of the early basic philosophies of the founders, which he knows from experience are essential for growth.

Those principles for growth were paying off big dividends for National in the few years after the Great War. Certainly there were a lot of headaches that furrowed the brows of men driving themselves forward with galvanic intensity.

The shortage of materials and machinery for the new plants served only to rub salt into the raw impatience of the Engineering Department. Men scouted the expanse of the nation for steel and equipment with which to build their plants.

Delays slowed the relentless expansion drive. Costs of materials and equipment soared.

The demand for the products of National Gypsum became so insistent that the original proposed capacities of the Baltimore gypsum plant and the Kimballton lime plant were stepped up—before the plants even were completed. This, coupled with the rising costs of building and equipping just these two facilities, meant that National had to lay an additional $3,350,000 on the line.

But the added expense meant little to the National Gypsum leaders. All they had to do was glance at the profit-and-loss statements, beautiful sights to behold even in the eyes of those uninitiated in the ways of finance.

Earnings had amounted to $1,000,000 in 1945 and sales came to $26,742,000. And by 1948 profit had swollen to

nearly $8,000,000 and sales to an incredible $68,125,000.

Important money, any way you look at it. But "money is the seed of money," as Rousseau once put it nearly two centuries ago, and National Gypsum was not by nature endowed with an over-abundance of it.

Right after the war the company had a nicely-blueprinted plan for growth during the next five years.

"We didn't have the money for our program then but we had two men on our Board who we thought could get it for us," Baker recalls.

One was Lewis G. Harriman, then president and later chairman of the Board of Directors of Buffalo's affluent Manufacturers & Traders Trust Company. The other was Joseph A. W. Iglehart, partner in the well-known New York brokerage firm of W. E. Hutton & Co.

It was Harriman who got the ball rolling by assembling a syndicate who agreed to put up $15,000,000 among them; later it was increased to $28,000,000. The list of participants in the loan reads like a "Who's Who" in the financial world—good evidence of the faith of the "men of money" in the future of National Gypsum.

There were the big Mellon National Bank & Trust Company of Pittsburgh, the First National Bank of Boston, the Mutual Life Insurance Company of New York, the John Hancock Mutual Life Insurance Company of Boston and the Northwestern Life of Milwaukee—all giants of the first magnitude in the world of finance.

Of course, the Manufacturers & Traders was part of the lending group, too, along with the Central National Bank of Cleveland.

With "new money" at hand, Iglehart then set to work to arrange a public offering of National Gypsum stock which gave the company more than $8,000,000 in additional cash. Another stock sale, to stockholders, brought in $5,500,000. And $18,000,000 was taken from earnings and depreciation and depletion reserves.

It was during these years, also, that National Gypsum was dealt blows that might have sent the management of many an ordinary company to its knees.

In quick succession four top executives either died or were forced to retire on the orders of doctors. All had been with the company almost since its inception.

They were Ralph F. Burley and Gordon H. Tarbell, both vice presidents and directors who had to retire. Frank E. Davis, long the company's secretary-treasurer, died. Robert W. Downes, sales director, was forced into retirement because of ill health.

On top of that, the major expansion program, which the company was in the throes of, had automatically created need for additional top men in every phase of the business.

Baker had good cause to pause for a moment and call to mind a talk he had given at a company sales meeting way back in January 1928:

"The sound business is one that has enough reserves (in men and money) to ride through the depressions without forced curtailment and its consequent loss of prestige and business. A growing business is always attractive because it can take care of the growth and development of the individual better than one which has become set and stabilized."

Baker had his growing business and, more importantly, he had depth in management to fill the voids left in the ranks of the top-echelon executives who had retired or died.

Now a new lineup for the first team of managers was stepping into the breach. A few of them, of course, had been first stringers right along and because of their versatility, they were taking over new posts. Take a look at the golden thread of experience that is woven throughout the careers of the new lineup.

Lewis Sanderson, his engineering assignment completed successfully, replaced Tarbell as vice president for operations. Coincidentally, he had replaced Tarbell as manager of a plant for another company back in the 1920s.

Dean Crandell, a gypsum pioneer in his own right, who had been vice president for research, became sales vice president for a spell.

Walter S. Corrie, a 1928 beginner with National, was elected treasurer, a post he has held since then.

Charles E. Masters, who holds a bachelor's degree and a master's degree in business from Harvard, became vice president in charge of accounts. He came to National in 1938 after 15 years with a large public accounting firm.

Fred A. Manske, who was slated to go all the way up the ladder to the presidency in later years, was named general production manager in charge of all plants. Manske has been with National ever since 1934.

William M. North, the possessor of a law degree, was elected secretary, a post in which he gained much knowledge for his subsequent rise in company affairs. He started in 1941.

About the same time, John W. Brown, who later became senior vice president, was appointed general sales manager.

David Skinner, later the engineering vice president, was named chief engineer. Simultaneously, Richard H. Means, a 1940 starter with National, became controller.

The plan that made possible these vast and smooth-flowing changes in management was no mere whim of the moment. It was what Baker has described as "the dynamic force for our future." The nub of this policy of depth in management, he puts this way:

"With hundreds of young people coming into the organization during each of the past years, we are assured a continuous flow up through the ranks of men and women to provide for succession in management."

A successful business, after all, is but the sum total of majestic human efforts. Thus, it's almost a truism to say that the toils of the people of National Gypsum have transcended those of its competitors. Growth and the status quo just aren't compatible.

"Most important and vital for growth are people," Baker has insisted repeatedly. "They must have faith and confidence, and recognize no substitute for hard-headedness, imagination and forward thinking in business. Our greatest asset is our people."

Baker's ideas on the development of the "National Gypsum family of people" long had been in effect but it was right after the war that these plans took on a more formal

character. Starting in those days a number of college graduates with a special hankering for building materials was hired each year to provide "a reservoir of managerial timber for the years ahead."

It was realized, too, that in the late 1940s the days of the "order takers" were numbered. A return to the days of the "hard sell" became the order of the day.

Accordingly, the further development of a still more effective sales force came in for special attention. New salesmen were being thoroughly schooled in the products and their uses. There was a heap of grooming of the sales force in modern construction methods and merchandising, with a few of the showmanship ideas of, say a P. T. Barnum, thrown in for good measure.

As 1949 ran out, National found that it had successfully demonstrated its ability to operate an expanded business in a competitive market. The postwar expansion program had been completed, many thought. Now there would be a period of consolidation of the gargantuan strides taken in a still-short span of years.

But what they did not know was that the backbone of the master growth plan set down a quarter of a century earlier hadn't even been tested yet. The first 25 years were merely a down payment on one of the most stupendous periods of growth rarely achieved by an American corporation.

The management of National Gypsum was trying on its seven-league-boots for size.

Chapter Four

"America is a land of wonders, in which everything is in constant motion and every change seems to be an improvement . . . no natural boundary seems to be set to the efforts of man; and in his eyes what is not yet done is only what he has not yet attempted to do."

ALEXIS DE TOCQUEVILLE
In "Democracy in America", 1835

THE FAINT-HEARTED ALARMISTS again were having a heyday as 1949 melted into 1950. The housing splurge just can't continue . . . supply is pulling ahead of demand, they lamented.

But at National Gypsum the storm signals fell on ears that had long been oriented to a more melodious sound—Growth. True enough, the company had experienced a decline in sales in 1949 but bold steps had been taken to correct that situation. And for those canny enough to pin-point them, there were signs that the housing curve which had flattened out would resume its climb.

After all, hadn't the nation's population soared to more than 150,000,000. That meant that 19,000,000 more people now needed a place to live than in 1940. Furthermore, change was one of the dominant moods of the times and more and more people were beginning to want something more than just a roof over their heads.

Melvin Baker was quick to spot the staggering potentials. Once more he lit the fuse for action on the sales, production, research and expansion fronts. The detonation was a big one which echoed from coast to coast.

A series of sales campaigns—product by product—helped a lot. Sales executives in the home office, vexed by the sales

decline in 1949, hit the road to beat the bushes for more business. The research tempo was stepped up. Production experts were dispatched to the plants to help cut costs on the lines. Obviously, these were not armchair generals. When the going got tough, they were on the front lines.

"And do you know," an executive remarked a while back, "you could throw bowling balls through the home office for a while and count on not hitting anyone. They were all out drumming up business. But the point is, the entire organization really became inspired by the boss' leadership. He put us back on the track."

It was the right track, too. Baker had been on target in his appraisal of the market for building materials for 1950. It was getting so he couldn't miss.

The product of that almost-unbelievable knack for outguessing the so-called experts was to bewilder the building materials industry in the decade of the 1950s. The economic climate of the moment or even the forecasts of business leaders would mean nothing as the valiant plans for further growth were unfolded.

A staggering $165,000,000-plus in cash would be laid on the line for the construction of new plants, mines, quarries and ships and improvement of existing facilities. Plans would be solidified for hurdling the Rocky Mountains. The limiting phrase, "our markets east of the Rockies," soon would disappear from the lexicon of the company leaders.

Research which had its beginnings in the kitchen of one of the founders would burst forth with a host of new and improved products for a better way of life for the nation's home owners. Other companies would be acquired at a breath-taking pace.

The outline of the years beyond the decade would begin to take shape. The pattern could be discerned with the discovery and development of reserves of hundreds of millions of tons of basic raw materials. Always, the creed of massive obeyance to the call of the future would be observed.

It would bring some new concepts in management. A new philosophy of operation of certain acquired businesses would emerge.

Plainly, this would be an age of maturity for National Gypsum. But it would not be a period without its turmoils.

The first of these reared its head as communist forces crossed the 38th parallel in a full-scale invasion of South Korea. In Washington it was 2 o'clock in the afternoon on June 24, 1950.

Our troops, ships and planes were ordered into the fight. General Eisenhower, in a Fourth of July speech, defended U. S. intervention against "the outright invasion" of South Korea.

Once more National Gypsum's unique talents would be pressed into the service of the nation's defense arsenal. Partly at least, as a result of its highly successful operation of the bomb-loading plant in Texas during World War II, the company was awarded a contract to run a similar plant in Wahoo, Neb.

And quickly came another assignment, the operation of a huge shell-loading plant at Parsons, Kan. National operated both of these Government-owned plants on a fixed-fee basis. The Niles, O., metal-lath plant was recalled to service, too. Again, large quantities of the portable airfields would be needed on the war front.

National's zeal for expansion and growth was whetted further with the dizzy pace of home construction in 1950. And a look at the books showed that not only had the plants shattered all production records, but sales and profits were at all-time highs.

In those days many were saying that the marvelous blueprint for a better life should be laid aside until peace and permanent security could be attained. The cry went that the nation would have to concentrate wholly on arming against the enemy and on building defenses against attack—that the betterment of living standards would have to wait its turn.

But Baker was of a different turn of mind. He was convinced that by constantly improving our way of life, we can stand as a stirring example of the advantages of living under a free economy. And he added to this view in an address to a group of sales executives:

"After years of depression, war, reconversion and now war again, our country will be ready for a great era of development. Every worthwhile product will find a market. With salesmanship of the highest order, this market can be an ever-growing, ever-expanding one."

As in the past, this swelling market for National's products did not just happen. It was made to happen.

After coast-to-coast television became a reality and Russia exploded its first A-bomb in 1951, National moved again.

The National Mortar & Supply Company, with an efficient lime plant at Gibsonburg, O., was acquired. And a check for more than $5,000,000 was written for construction of a new paper mill at Pryor, Okla. Integration again! The paper mill "created" savings of up to $1,000,000 a year over the cost of purchasing paper in the open market.

More sizable markets were opened up in 1951 between the Mississippi and the Rockies with the construction of a $3,500,000 wallboard and plaster plant at the existing Medicine Lodge, Kan., plant.

Prosperity was a normal-sounding word to National by this time but the burgeoning growth pattern was placing a heavier load on the shoulders of management. The day-to-day operation of the business was leaving little time to devote to long-range growth.

Accordingly, the post of chairman of the Board of Directors was created for Baker who, of course, would continue as the company's chief executive officer. For president, the nod went to veteran Lewis Sanderson, who would hold the reins of the company in its current operations.

At the same time, Fred Manske was elevated to the position of vice president of operations. His job was a big one, encompassing manufacturing, purchasing, transportation and engineering. Here was a man, to be sure, who was cast in the classic mold of the well-trained, well-rounded executive with a tremendous passion for hard work.

Later on, in May, 1956, when he took over the presidency with the retirement of Sanderson, a fellow executive described his ascent as "logical, natural and almost inevitable, a tribute to a smart guy who worked very hard."

Besides that, Fred Manske is a deadly earnest and unassuming man who possesses a talent for the art of human relations on the job.

Baker and Manske seldom are at odds over decisions. Says Manske of this relationship:

"A lot of Melvin Baker has rubbed off on me. Once we agree on something, we believe in moving—no procrastination—get the job done."

With the new change in the lineup, the National Gypsum management team forged ahead repeatedly during 1952.

Wesco Waterpaints Inc. of Berkeley, Calif., was picked up for about $2,250,000 in National stock. In an instant seven plants had been added and a new field had been entered. (Some of these paint plants later were disposed of because of their uneconomical nature.)

The addition of the paint business was logical and pure in its simplicity. Hadn't the basic fundamentals of growth been blocked out with a near-mathematical precision so many years back?

The next threshold National was to cross—scant months later—bore the same distinguishing traits of logic.

The new venture was a full line of asbestos-cement products for exterior walls. Now, for the first time "the complete Gold Bond wall" had become a reality.

It came with the Asbestone Corporation, purchased for some $5,000,000 worth of stock in January, 1953. With its plants in New Orleans and St. Louis, it was the nation's largest independent producer of asbestos-cement products.

Less than three months later the line was rounded out with the purchase of a major asbestos-cement plant in Millington, N. J.

Indeed, the master plan drafted by the founders was letter-perfect. Not a hitch had developed.

But the leaders of the company, as they had been doing since the start, were not merely concentrating on a year-to-year plan for growth. They knew that the horizons they could see were but the limit of vision for men without magic in their dreams. To them the horizon was not a boundary but rather a promise of what lay beyond.

The spirit of enterprise and faith would help make that promise a reality. For tools there would be the driving force of imagination. Call it research, brought under the microscope of sales.

You might say that the foundations of National Gypsum rest squarely on the bed-rock of research. For wasn't that first lighter, stronger, more flexible wallboard a child of research?

Leaf through the early annals and you'll find that the company heaped a lot of importance on research. Take this excerpt from the 1937 report to stockholders:

"Even before ground was broken for the first operation in 1925, National had established one policy. That was to base the expansion of the company on the solid foundation of research engineering. No product was to be manufactured and no new product added that did not represent either an improvement in existing material or a product for new uses."

The fertile soil of ideas had been tilled well by the men of research in those early years. They nurtured and brought forth the industry's first wallboard with a surface that looked for all the world like a fine wood. They turned to metals and found a way of laminating sheets of extremely thin, pure aluminum foil to gypsum board. Wonderfully improved insulation qualities had been created. Then there was a new method of construction researched and produced—the revolutionary "floating wall" nail system—and still better wallboard, and new production processes to insure built-in quality.

All of these developments, and many more besides, were the products of the men of vision during the 1930s. In those days the research efforts largely were centered at Clarence Center, site of the first plant. But as the web of plants was woven across the states and into Canada, research laboratories were established at six additional plants, product by product.

Logically, as the products became more numerous—there were more than 225 of them by 1953—a new policy was called for. National is a creature of the axiom that the

future belongs to those who prepare for it and execute their plans with precision. Thus, the decision was made to centralize basic research in a brand-new $1,000,000 suburban Buffalo Research Center, opened in January, 1954.

The lean years when every penny for research had to be pinched out were behind. Operation Research had come of age. A growth business in itself had assumed a new stature. Here was further evidence of the belief of the company in a never-ending procession of tomorrows. As a plaque hung in the lobby of the Research Center so nicely phrases this belief in research:

"The foundation of research is curiosity—
The purpose of research is progress—
The life of research is idea—
The soul of research is integrity."

And today in this 35th anniversary year of National the huge Center came in for its share of growth with the completion of a major addition devoted wholly to a new aspect of research, plastics for building materials.

But what of the underlying philosophies of the great strides taken by National in forging its techniques in research?

Assuredly, they weren't born with the construction of a new research building. And they didn't come about from the tinkerings of men who had an interest in science.

As a basic premise, there was the realization that possibly one of every five new products is successfully marketed. Sounds discouraging, doesn't it? Yet no company, large or small, can afford many major product failures.

National's program for research was evolved over many years and was trained on a target that called for a minimum of risk in bringing out a new product.

"Our basic philosophy is quite simple," Baker explained in a 1958 address. "We call it keying research to sales. As a first step we decide what new products will be developed—measure the idea against company policy. New products must fit within the long-range pattern designed for growth in the future."

From there on, management must ask countless questions. Will it fit into distribution channels? And with millions of dollars tied up in mineral deposits, will a new product be able to take advantage of these capacities? How much capital will be needed? How about price?

Some have thought that research should be divorced from management. But then you have the concept of a new product tailored exclusively by research technicians. That would amount to nothing more than building a giant satellite and ignoring the intricate guidance system to put it into orbit. Thus there emerged the import of research firmly lined up with company policy—a comprehensive planning of new products. The maximum of talent and money is applied where it belongs, squarely on products that will sell in a well-defined market.

Of course, the introduction of a product thoroughly researched in the laboratory involves a sweeping panorama of allied activity. There is market testing, styling and packaging, sales forecasting and advertising, to mention just a few.

And throughout the process, the whole team keeps the idea in the forefront that it's awfully hard to sell something nobody wants. The veterans can remember the day when dealers were crying the blues because they were being overstocked with porch columns.

National had injected one more element into its research activities in the presence of Vice President Dean Crandell, a curious blend of graduate chemical engineer and former sales vice president.

"We're a bunch of fellows who spend much of our time worrying about tomorrow," Crandell explains. "Sure we live in the future. You've got to in this business."

Dean Crandell, with dozens of patents to his credit, likens research to capital. Sort of like building a new plant. You don't see the return on your capital right away because of the time lag between the seed of an idea and the day the product appears on a dealer's shelf.

Salesman-Scientist Crandell tells the tale of one product that his researchers spent a year and a half in developing

before they told anyone anything about it. It's a brand new wallboard coated with a vinyl plastic film, textured and decorated in various colors. A risky venture, some might think, but remember Crandell was well steeped in sales know-how.

You might wonder where the steady flow of ideas for new products originates. Well, National picks them up from just about every corner—from contractors, sales personnel, production men, executives, its own researchers and even from rank outsiders. However impractical the idea may seem on the surface, it gets a thorough screening.

National has such faith in its research activities that it now is spending more than $1,000,000 annually on this effort.

"Business should keep in mind that America will grow on its faith in the future and, because of this faith, we will keep on developing new products, new services, new ideas," Baker once said pointedly.

But hark back to a hot day in July, 1954, for a really unusual tale of raw faith in a development that was considered impractical, if not impossible. It was on that day in a field in southern Indiana that National Gypsum broke ground for a gypsum mine in an area where it had been told the wonder rock did not exist in commercial quantities.

The story of this discovery of "white gold" in Martin County, near Shoals, Ind., had its beginning way back in 1948. National's postwar planners then sent out a "shotgun mailing" consisting of a simple three-line form letter to state geologists in practically every state where they thought there was a remote possibility of the existence of gypsum. Naturally, if gypsum could be found in an important market area, that would be a first-rate site for a gypsum-products plant.

Among the replies to the form letter was one from the State Geological Survey at Indiana University. The answer was "No" but the letter did mention that a few years earlier gypsum had been found in Indiana by an oil-exploration team. The hitch was that it was about 500 feet underground.

Might as well be on the moon, National thought then.

The mining men knew that gypsum ordinarily is mined or quarried a great deal closer to the surface. And so the letter was tucked away in a file and forgotten.

But by 1951 National had enlarged its geology and mining corps. Out popped the letter from Indiana one day. It seemed that the company was disturbed about the high cost of shipping gypsum products into sections of the Midwest from other plants. Here might be something worth investigating.

And so a team of experts, under the strictest orders to reveal nothing of the purpose of the trip, was dispatched to Indiana to start the search for gypsum in large quantities. Hundreds of core drills burrowed deep into Indiana land. They drew a blank. The initial appropriation of $125,000 was gone. The searchers moved to another area, in Martin County, one of the poorest in the state. Hundreds of additional samples were taken, some of them from as deep as 700 feet.

Results there appeared encouraging from the first but the drills were chewing up money at an alarming rate as they bit into the rugged, hilly terrain. By this time nearly $350,000 had been sunk into the project.

Many men of fainter conviction would have thrown in the sponge long before that. But at National they were imbued with the moving and living force of faith. You couldn't see it but you could feel it. You couldn't test it in a laboratory but you knew it was there anyway.

At last, dogged perseverance paid off. Pay dirt was struck. A vast 2,700-acre tract of commercially-pure gypsum rock was blocked out by the diamond-tipped drills. Here was enough of "the rock nobody knows" to last a century.

"At last! We've found it," the triumphal cry might have gone out from headquarters.

But it didn't. The entire exploration had been shrouded with a thick blanket of secrecy. Curious farmers were told anything that came to mind, ranging from replies that the crews were searching for oil to an explanation that they were hunting for fossils of prehistoric monsters.

The idea, of course, was to keep news of the discovery

from the competition. But it was too big to keep under wraps for long and in time the secret leaked out. National had to move fast. The competition was breathing down its neck and, in fact, had sent representatives to Shoals to option land.

National immediately pumped millions of dollars into the project. A mine that descended to an unprecedented depth of a tenth of a mile was built. A spanking new plant to make Gold Bond gypsum products was erected at the head of the mine and full-scale operations got under way in the summer of 1955.

Shoals was so overjoyed with its new $9,000,000 Cinderella industry that it declared a civic holiday and staged a parade in National Gypsum's honor.

Once again National had broadened its markets. And once again the fabric of expansion had been woven from the threads of the grand master plan of 30 years earlier—the acquisition or development of mineral deposits, mines and plants, all geographically located to permit shipment into the principal markets.

In the same year the Shoals plant was completed National took another close look at the construction industry. The picture was bedazzling to say the least. Out went a report to stockholders that literally bubbled with enthusiasm:

"The booming building industry is the brightest star in American prosperity today. And there appears to be no dulling of its luster in the years ahead. The birth rate, larger families, higher incomes all indicate a greater need for buildings of all kinds in the future. This demands a broader expansion of our company's facilities for producing building products."

More to the point, National had just pledged $95,000,000 for a five-year expansion program. As matters turned out, the money was spent in only four years. And then $125,000,000 more was earmarked for a new and more glorious five-year program.

During the mid-1950s National's plants were having tough sledding to keep up with the urgent and ever-increas-

ing demand for building products. This was particularly true of the four gypsum plants on the Atlantic seaboard. In fact, the pace was so stiff that National figured it probably lost some business to substitute materials.

Bold maneuvers were called for. The accent would be on expansion. Immediately, capacities of the New York, Baltimore and Savannah gypsum-products plants would be upped by one-third. There would be a second fiber insulation board plant at Mobile, Ala.

Two new seaboard gypsum plants would be built and thrown into the breach. Strategically located, of course, at Burlington, N. J., on the Delaware River to serve the growing Atlantic seaboard market, and at Westwego, La., near New Orleans. A new paper mill would be built at Anniston, Ala., to supply the new gypsum plants with paper liner. And for good measure, a new paint plant would rise at Raritan, N. J.

Never before had so many plants been built from scratch at one time. All told, five newly-built plants were opened in 1956.

It stood to reason that the enlarged gypsum operation would require enormous new tonnages of gypsum ore. This was part and parcel of the over-all plan. Until the expansion of the mid-'50s, the eastern seacoast plants had received their gypsum ore from a company quarry on Cape Breton Island at the northern tip of Nova Scotia. But this operation had given the company many a headache. For one thing, the port was closed in by ice five months of the year. And the gypsum deposits were far from adequate.

Another assignment for the travel-weary mining engineers and geologists. They "discovered" gypsum once more, a mere 30 miles from Halifax in Nova Scotia. By the time they had finished proving it up, its gargantuan size was enough to stagger the imagination—sufficient gypsum to keep six plants operating full blast for 100 years and more. One of the largest known gypsum deposits on the entire North American continent, they called it.

Unlike the Indiana deposit, the new bonanza virtually was there for the taking, nestled under a relatively thin

skin of overburden only 20 to 40 feet thick. A simple task to peel off for giant earth movers.

By mid-1955 the new gypsum "find" was being blasted from the walls of a new quarry, crushed right on the spot and automatically loaded into railroad cars bound for a new 150-acre company dock area at Halifax. There mammoth machines completely inverted 80-ton freight cars as simply as you might tip your hat. Push buttons took care of loading the company's ships.

Costly as it was (more than $6,000,000), the new operation meant money in the pocket for National. The Port of Halifax is open the year 'round. And its deep-water channels can float large ships, a fact which prompted National to expand its "navy." Arrangements were made for construction of three fast 18,000-ton ocean freighters which could operate 365 days a year and cut precious time from the runs to the seaboard plants.

The whole package added up to savings of more than $1,000,000 a year. There was another promise for the future in the deal, too.

With the opening of the St. Lawrence Seaway, then not much more than a dream, it wasn't difficult to visualize National's ocean freighters hauling cargoes of gypsum ore from Halifax to Great Lakes plants if the need arose.

But for men whose eyes were cast on the future, the opening of the Seaway created even more exciting visions of growth. The new waterway, in effect, would bring into being a "fourth seacoast." This, they knew, would open up incalculable possibilities for the growth of markets in the Great Lakes area. This was the throbbing, pulsating industrial heartland of the nation. The great population centers along the shores of the Lakes were spreading out into suburbia. The very thought of this mushrooming market sent the minds of the planners spinning.

"Here is a market we have never been able to exploit fully," they thought.

The reason was a simple one. The company had been forced to supply a large share of this market from plants in National City, Mich.; Ft. Dodge, Ia., and Clarence Center,

N. Y. Absorbing these freight bills chewed up profits on this business pretty badly.

Well, it all boiled down to more expansion—$25,000,000 worth.

It follows that a major competitive offensive in these markets would mandate a new supply of gypsum. It would have to be a big one. The prospectors knew that there was more gypsum to be found in the general vicinity of the National City plant in Michigan. After all, hadn't gypsum been mined in this general area as early as 1861?

But just how much was there was another matter. The treasure hunters went to work again, making a veritable pincushion of the earth's surface with their core drills.

Step by step the drilling screws punctured out a chart of the boundaries of the deposit. It was just as though they were able to lay bare the long-guarded subterranean secrets of nature. At length the picture became crystal-clear. Here was a "strike" to quicken the pulse of even California's gold-hungry forty-niners.

An El Dorado of magnificent proportions! Tawas City, Mich., some 200 miles north of Detroit. Size: At least 75,000,000 tons, maybe 100,000,000 tons, a 100-year reserve of gypsum.

By chance, the prehistoric upheavals of the earth had laid down this "most exciting gypsum discovery of the year" in neat fashion. It was a scant six miles from Lake Huron and only four miles from the National City plant.

The green light was signaled by National management and stripping of the overburden got under way, along with construction of a ship-loading terminal to stretch more than a fifth of a mile out into Lake Huron.

While all these plans were moving ahead, sites were picked for two large new gypsum plants on the Great Lakes that would be supplied by the Tawas City operation.

Spotted with all the care that a general places his armies, the new Great Lakes plants were planned for Waukegan, Ill., and Lorain, O. The first would make possible prompt deliveries via low-cost water transportation into the dense Chicago-Milwaukee markets. The sister plant, at Lorain,

was aimed at the important Cleveland area and other sections of Ohio. Gypsum products started rolling from the Waukegan plant in May, 1958, and from the Lorain facility in March this year.

It's virtually a foregone conclusion that in later years you'll see more National Gypsum plants strung out along the shores of the Great Lakes. Charting further growth of National along the Lakes is as simple as keeping tabs on the population growth in this area and its resulting spurt in home building.

In the same manner, the expansion artists were far from idle while the program moved from blueprints to completed plants. A good many of them were up to their necks in another integration project in the wilds of Quebec in Canada.

Their plans there revolved around a curious heavy rock that had trapped inside of it a white silk-like fiber that could be spun or woven. It is stronger than steel and as flexible as a strand of thread. We know it as asbestos.

For years National had been forced to buy asbestos for its three asbestos roofing and siding plants in the open market. A costly affair it was, and plainly not in keeping with the company's original policy of owning or controlling its major sources of raw materials.

The outcome, as you might suspect, meant that National would build a new asbestos mill and quarry. Location: Thetford Mines, Quebec, in the heart of asbestos country. Cost: $9,000,000, which will result in savings of about $1,000,000 a year. Important money in any league!

Obviously, the little fellows don't get into asbestos. It's a lot like gypsum in a way. Costs a whale of a lot of money to build mines and plants and only the well-financed companies can manage it.

Clearly, the cogs in the master plan of 1925 were meshing with scientific accuracy. But couldn't National get a bigger slice of each dollar spent for building materials?

The answer seemed to be cloaked in the simple phrase fashioned many years before, "a complete line of building materials." Why wouldn't ceramic tile be a logical addition? Gleaming kitchens and bathrooms, colorful lobbies

and swimming pools and store fronts came to mind at the mere mention of the word.

And cement?

With the Great Lakes program well under way then, it would be a natural. Furthermore, a lot of gypsum is used in making cement and National could supply that easily. National used large quantities of cement in its own asbestos-cement plants and it had to be bought from others. And wouldn't huge public-works projects that thrived on cement be a sure bet to get top priority if general business ever needed a shot in the arm?

And so the directive went out to the expansion specialists:

"Build us a tile business second to none. And then get us a first-rate cement business."

The expansion and diversification job went to Bill North, vice president for corporate development and an acknowledged tactician in the legal aspects of such an undertaking.

A decision was made that National would attempt to acquire companies in the tile and cement fields instead of building its own plants. These were tricky businesses that required long years of experience to operate.

So Bill North started an exhausting study of all the leading tile and cement companies. Their businesses came in for close scrutiny. Their markets got a thorough going over. How did their managements stack up?

The news finally leaked out in August, 1957, that National was negotiating for the acquisition of the American Encaustic Tiling Company of Lansdale, Pa. Then, just as suddenly, the talks were broken off.

It wasn't until the following May, in 1958, that National directors voted a new offer that seemed to be acceptable to directors of American Encaustic, whose stock, incidentally, also was listed on the New York Stock Exchange. Finally, in August of that year the acquisition became final. The deal involved the exchange of some $14,000,000 in National Gypsum stock, for the shares of American Encaustic.

National actually had a lot in common with American Encaustic.

The original company traced its history back to 1875 but

the present business had been founded only two years before National's by Malcolm A. Schweiker and his brother Roy. They, too, had started with a shortage of capital and customers. And unlike many of their competitors, they survived the depression by cutting costs and raising quality with new processes.

By the time National took over American, it was turning out more than 250,000,000 pieces of glazed ceramic tile a year. The basic clay-like raw material, with the tongue-twisting name of pyrophyllite, comes from two company plants in North Carolina and one in Newfoundland.

Bill North's job, of course, was far from finished. He still had tile on his mind and cement, too. It seemed that there was another company that had a close bond with American Encaustic.

The tie harked back to 1928 when Gordon and Norris Phillips of Olean, N. Y., dropped in one day to see the Schweiker brothers in Lansdale. They had a proposition. The Phillips family operated the Olean Tile Company in Olean, N. Y., master producers of unglazed ceramic mosaic tile, used primarily for floors.

The gist of the conversation was a suggestion that the two companies get together and sell their products through the same outlets. They shook hands on it and the deal was made. Twenty years later, in December, 1958, Gordon and Norris Phillips shook hands again—this time with National Gypsum.

Another tile company had been acquired—for more than $2,500,000 in National stock.

Baker's expansion-diversification dictate was bringing solid progress. But what about cement?

North and other executives who took a hand on that score hadn't been frittering their time by any means. One company in particular had attracted their attention.

They had approached management of this closely-held company many months earlier to see if they could develop a community of interest. The cement company's stock was closely held by members of a well-heeled family. A pitch was made that perhaps this family might be interested in

having its money in a diversified company whose stock was readily marketable.

Then came more talks . . . an offer . . . a counter-offer.

"We were getting closer all the time," North recalls. "Each company's directors then gave authority to small groups of executives to negotiate a final agreement. Well, one day we took their people to lunch and made our final offer. We told them to contact their stockholders. They called us later the same afternoon and told us 'you've got a deal.' "

The company, it turned out, was the giant Huron Portland Cement Company. The news startled the industry, to put it mildly. This was a real coup. The deal had taken more than a year to work out but so secret were the negotiations, that even the cement industry was taken by surprise.

National Gypsum's 30,000-odd stockholders were startled by the plan, too, but they were so delighted with it that they gave it a near-unanimous "yes" at their annual meeting in April, 1959. And to top it all, they expressed a solid vote of confidence in the company's long-range plans by voting for a doubling of the company's authorized capitalization—from 5,000,000 to 10,000,000 shares.

For the 1,014,300 shares of its stock National picked up some pretty impressive assets: The world's largest cement plant, at Alpena, Mich., with a capacity for producing 12,000,000 barrels of cement a year; a string of 12 distributing plants spotted at ports along the Great Lakes; a fleet of half a dozen self-unloading freighters (a seventh is being added); a 200-year reserve of limestone and a 125-year supply of shale, both located virtually within a stone's throw of the Alpena plant.

It was, in truth, the biggest acquisition in National's corporate history and, as Baker said at the time, "our most important growth investment." But he was quick to add:

"We're not promiscuously trying to buy companies just for the sake of being big. We do not want merely to stay in business, to coast along. Our objective is to provide economic stability in our present fields of endeavor, and at the same time to broaden and diversify our line of products.

It is a worthwhile endeavor, producing as a result maximum rewards in terms of sales, profits, employment, job satisfaction, opportunity for advancement and service to the public."

As well as the new assets in cement and tile, there emerged also some pretty important new thinking for National Gypsum.

"You know, one of the most important elements that influenced our thoughts on the cement and tile companies was the fact that they had well-seasoned managements," Baker points out. "They had all been successful businesses and had grown. We liked that growth and we know, too, that there will be a great deal more of it for these companies in the National Gypsum family."

That further growth was undertaken immediately by National with the addition of major new facilities for increased and more efficient production at the tile and cement plants. Huron Cement's "navy" was enlarged with the purchase of a seventh ship that will be placed into Great Lakes service eventually.

To round out a complete line of products for the new tile operation, National in June, 1959, acquired the Murray Tile Company, with plants in Cloverport and Lewisport, Ky. It's the nation's second largest producer of quarry tile, a product designed especially for outside floors that take a real beating.

Before National entered the tile and cement businesses, all of its plants that had been purchased or built in the U. S. had become an integral part of the National Gypsum organization. But National realized wisely that management of any company can become top-heavy, particularly when you're dealing with businesses not thoroughly familiar to your own operating people.

National knew that its top managers in the home office couldn't press buttons and expect things to happen in a trice in the new far-flung operations in the field. And so a new concept of management was evolved for the cement and tile businesses. Some have called it "middle-management" or "permissive management."

But whatever label you pin on the plan, it amounts to a decentralization of management responsibilities, except for control of certain financial matters and top-drawer policy. The tile and cement companies were set up as separate divisions, all wholly-owned subsidiaries of National.

As President Manske notes, it adds up to a dovetailing and pooling of interests, that makes possible an exchange of talents between the parent company and the divisions. The decision to set up the new divisions was prompted in part by the realization that it would be an arduous task, if not an impossible one, to hire the likes of the men who ran the cement and tile businesses, all veteran professional managers.

There is Paul H. Townsend, who has served Huron well for 40 years, sixteen of them as president. He became a director of National and chairman of Huron.

Then there is H. Ripley Schemm, an exceptionally able administrator who has played a major role in the growth and development of Huron since 1925. He became president of Huron, backed up by Sales Vice President Clarence L. Laude, Production Vice President Charles M. Adams and Secretary-Treasurer Earl W. Denby.

For the "new look" in the American Encaustic Tiling management, Malcolm Schweiker, who helped form that company, was tapped for president of the division. His brother, Roy, became division executive vice president, assisted by Production Vice President C. S. Criswell.

To complete the tiling-team management, Norris Phillips was named to head the Olean Tile Division and Edward M. Adams, the Murray Tile Division.

"These men, and all the many others in key positions, give us the assurance that we will prosper in our cement and tile businesses," Baker told a visitor the other day.

Strange to say, the most significant growth factors for National in the decade of the '50s were not alone in the amassing of tremendous new capacities to satisfy building needs for the period. Nor was it only in the three-fold increase in sales, as well as in earnings.

President Manske thinks that part of the meaning of the towering achievements of the decade lay in the constant

stream of ideas that flowed to top management from all levels of the organization.

The competition in today's markets is so fierce, Manske stresses, that any company that does not encourage innovation, new ideas, and changes will flounder and die. It's not only an over-the-counter tug-of-war with other products in the building-materials field, but a struggle to capture dollars that might be spent for something else. That's where the spark of creativity must be fanned into the flame of progress. At National Gypsum the development of the individual gets top billing. Here's how Fred Manske lines up this philosophy:

"There is a distinct tendency to identify progress with group action. Yet, no group is better than its best individual. And, as history has shown time and time again, great ideas have not resulted from committee meetings, but from the magic spark in the mind of an individual—a Plato, an Aristotle, a Beethoven, a Jefferson, a Lincoln, an Einstein, a Ford. At National Gypsum we constantly foster a climate which will encourage a person to stick his neck out and advocate change."

Specifically, this "climate" to keep the stream of ideas flowing to top management is created in a number of ways.

For one, the channels of communication are wide open. Once a year members of the sales force are recalled to the home office and encouraged to express their ideas on how the business can be improved. They get a new injection of enthusiasm, an up-to-the-minute schooling on the new products and their uses.

The "idea bank" gets some fresh deposits, too, from regular meetings of plant managers and voluntary employee training courses. Even the top executives aren't immune from the plan to foster creativity.

Communication between departments is the aim of almost-daily executive luncheons. Management's creative powers are fertilized through conferences with other companies on various subjects. And membership in professional societies and on boards of directors of outside organizations puts them in close touch with the ideas of other fertile minds.

All this entered into the towering achievements of the 1950s and the preparation for the future. In effect, the snipping of stodgy "chains" in the chain of command opened up the channels of communication for the free flow of fresh thought. It meant that courageous men could devise and execute bold plans without undue concern over the heavy stakes on the line.

But perhaps even more than that, the decade was one in which a well-knit organization of dedicated people laid down a solid foundation for what they are convinced will be the most fabulous ten-year period in the nation's history —the 1960s.

The tools are at hand. The rewards will be great for those who are ready. National Gypsum knows it is prepared. So take a look and see specifically what is exciting the imagination of these men of tomorrow.

Chapter Five

"I hold that man is in the right who is most closely in league with the future."

HENRIK IBSEN
In a Letter, January 3, 1882

IN THE LOBBY of the headquarters building of the United States Department of Commerce in Washington there's an electronic "census clock" with more romance in it for the professional economic prophets than any other instrument in the entire world.

This particular "clock," figuratively speaking, is the nation's tabulator of vital statistics—and they're exceptionally vital ones for people in the business of manufacturing building materials. The unusual device accomplishes its mission dramatically with a profusion of vari-colored flashing lights: one every 7½ seconds to signal the miracle of a birth; one every 20 seconds to mourn a death; one every 1½ minutes to welcome an immigrant; and, finally, another only once in 20 minutes to bid farewell to an emigrant.

Someone with a head for figures calculated that the net result of all the flashes means an increase in the country's population of one person every 11 seconds—around the clock, 365 days a year.

Well, what does that mean to a company in the building-materials business? Plenty!

To start with, it heralds the most awe-inspiring explosion in the population that this nation ever has witnessed. Time-

table: The decade of the 1960s, accelerating as the ten-year period progresses and into subsequent years.

The men at National Gypsum who make it their business to take just as sharp a look into the future as is humanly possible have come to some pretty startling conclusions on the meaning of this population surge. It has rekindled the brightly-glowing spark of growth in the minds of top management.

With their eyes peeled on the "census clock," they estimate that our nation will become one of a staggering nearly 220,000,000 people by 1970. That means simply that nearly 40,000,000 more people will be living in the United States ten years hence.

It's pretty obvious why this population Vesuvius which is about to erupt is exciting this growth-slanted company. All of these people will need a place to call home. And to support the population leap, there'll be more shopping centers, schools, churches, public buildings, offices, factories, highways, bridges, hospitals—in fact, everything that's a part of our everyday life now and a lot more besides.

It's the business of National Gypsum to produce huge quantities of materials that go into the construction of all these facilities. At this very moment the forward-looking planners at National are hard at work charting the fabulous growth they know is in store for the nation and their company in this decade and the years beyond.

This is no fanciful excursion into a Never-Never Land. It's cold and intensely exciting reality, backed up by some solid statistics—and people, millions of them.

Just since World War II our nation has added more people than were born in the combined decades of the 1920s, 1930s and half of the 1940s. But to get to the core of this skyrocketing population, you have to take a closer look at the "fine print" in the cold statistics.

Remember the 1940s when the G.I.s and later on the ex-servicemen were lining up at the marriage bureaus across the nation? Well, it seems that unlike the "Hollow Generation" of the 1930s, they had a whale of a lot of children. "War babies," some of them were called.

They're growing up too—millions of them—and that's the twist to this whole population splurge that's intriguing National Gypsum.

To interpret this "growing up" in terms of National's balance sheet and profit and loss statement, you have to get down to the matter of love and marriage, a delightful state that makes National's management just about as happy as any bride and groom.

The babies of the 1940s are entering their twenties now or will be by the time 1970 rolls around. The twist to this is that this is the age group that does most of the marrying, most of the family forming and a lot of the renting and, to some extent, home buying. Whether the young marrieds buy a home or not, they'll still have to have a place to live. So will those who remain single.

Economist Leo Cherne, who often tends to look at the dark side of the nation's economic health, thinks that this age-group oddity is perhaps the most important factor in what he is convinced will be the greatest boom in history in this decade.

In reckoning the adult population for these years, there's no guessing involved. All of these young men and women already have been born and, it follows, so have all the people who will retire. Economist Peter F. Drucker has written that nothing short of a tremendous catastrophe, such as an atomic war, could possibly stop or even slow down the growth of the American population for the next 20 years.

It is estimated that the number of young adults, in their twenties, will rise by more than 8,000,000 during the 1960s, a leap of some 40% in that age group. That's pretty startling when you consider that during the boom decade of the 1950s, the number of men and women in their twenties actually declined about 2,000,000. That was caused by the depression of the 1930s when the economic climate was a poor one for marrying and having children.

Actually, the dramatic rise in the number of new households probably won't get under way until 1962 or 1963. Right now there are approximately 53,000,000 households in the country and by 1970 this figure will have risen an-

other 10,000,000. It could easily be more. The character of these households is in for an overhauling, too.

Possibly 60% of all households now are headed by men and women in their middle years. Ten years from now the younger generation and the oldsters will predominate. People still are tending to live longer with the ways of modern medicine.

At any rate the rise in the number of households represents the rock-bottom need for new housing. On top of that you've got to add the need for replacing homes destroyed by disaster and to make way for highway and other public and private projects. And then there's the mounting interest being shown in huge urban redevelopment and renewal programs in which, incidentally, National's Chairman Baker has been a driving force.

If you consider these factors and even an extra-conservative estimate of the ten-year population growth of, say 36,000,000, that means there will be a basic need for at least 15,000,000 new homes by 1970. As a matter of fact, the forecasters at National Gypsum think that if the nation is to improve its living standards, a total of 20,000,000 new homes will have to be built during the 1960s.

There are a good many impelling forces besides the population increase itself that already are bubbling fiercely to fortify this housing demand. For one, Americans are dancing to a merrier tune than ever for the popular game of Musical Chairs in Housing. An average of one person in every five moves his residence every year.

This doesn't mean that they are all pulling up stakes and moving lock-stock-and-barrel across the continent. A great many are doing just that but a lot more are changing their addresses to the "airier" suburbs where some 70% of all new homes are being built today. And as the networks of new superhighways further interlace the nation, the population will become even more mobile.

All this—and suburbia, too—will create a need for more housing in new areas.

Besides that, the demand for housing in the 1960s will get another booster shot from the spreading of retirement

plans, life insurance and Social Security. That means simply that more and more elderly people will want and will be able to afford "a place of their own" in areas with favorable climate. Take a look at the Florida land boom for sure-fire evidence of this market in housing.

It's a handy thing to know that we're in for a brain-taxing spurt in our population but it would be even more useful if you knew where the big increases will take place. And the chartists at National Gypsum have that one figured out, too.

They have to be vitally concerned with such matters. In the building-materials business you don't ship bulky products very far. Too costly. You plunk your plants down right in the heart of the most important markets, something National has been doing ever since its beginning.

For National Gypsum the key to the areas of the greatest growth in population in the 1960s is outlined in detail on a map in the office of William M. North, vice president for corporate development. It shows clearly that the states that will experience the biggest surge in population are adjacent to major waterways. There's the sprawling West Coast and the states that border the Great Lakes, as well as another large chunk of the East.

It all means that the population eruption will be the equivalent of adding to this country all of the people who now live in the western half of the United States.

In calculating the meaning of this in terms of housing demand, the projectionists at National tend to be conservative.

"We're not hanging our hat in any Utopia," explains National's expansion specialist, Bill North. "You're realistic —down to earth—when you get to the business of laying millions of dollars on the line for new and expanded capacities."

That's why National realistically figures that the country will be building only 1,630,000 new homes a year by 1970, a figure which is still pretty impressive by any standards. But the housing seers at National are quick to interject that it easily could run as high as 2,000,000 new homes annually ten years hence. For comparison purposes, home builders in

1959 erected around 1,380,000 new dwellings and that was a good year.

Naturally, to buy the homes projected for the 1960s will take quite a chunk of money. So it was only reasonable for National Gypsum's analysts to take a close look at the nation's purse. They found that the tempo of the income revolution that's been in progress for decades has picked up a full head of steam and is in for an injection of real missile-age vitality in the coming years.

It all started with the emergence of a new generation of families in the lower-middle income class. The upgrading of their incomes enabled them to buy millions of "Tin Lizzies" and radios. Then came the great income equalizers of the social legislation of F. D. R., war, and higher taxes. The so-called "class" markets paled when held up beside the new "mass" markets. Fields of TV antennas sprouted up all over the nation. Tail-finned cars nestled in garages in important numbers. The suburbanite with a home of his own achieved a new status. A man in an Ivy League suit and a shiny new home might be a business executive or a factory worker. It became increasingly hard to tell.

Since World War II more Americans have had more money to spend than ever before in the nation's history, despite rising taxes and prices. This also means that they have had more of what the economists call "discretionary dollars" to spend. These are the dollars you have left over after providing for the basic necessities of life. Families with low incomes tend to spend just about all they have on these necessities but as their incomes rise above the subsistence level, it can be a matter of discretion on just how they spend their additional dollars.

These "discretionary" dollars provided much of the fuel for the boom years of most of the 1950s. And, as National Gypsum sees it, there will be a lot more of these dollars which can be translated into a tremendous impetus for new housing in the 1960s.

The cold figures take on a dazzling new glitter when you consider what they will mean to the nation and companies such as National. Take what is called per capita disposable

personal income. That's the average income of every man, woman and child in the U. S. after taxes. For 1959 it came to an estimated $1,846. For 1960 it's expected to hit $1,955. For 1970 it's calculated at $2,170, and that's a really conservative estimate.

For the nation as a whole, this disposable personal income is figured at $354,300,000,000 for 1960 and for 1970 at $475,000,000,000 conservatively.

It's important to note, too, that all of these dollar figures are calculated on the basis of today's prices and discount inflation in the future.

Realistically, National's Chairman Baker believes that we will be plagued by creeping inflation for many years to come. He's quick to point out, also, that the company's long-range forecasts are based on the assumption that the "cold war" won't get colder or change into a "hot war."

The economic facts haven't been varnished with a coating of blue-sky thinking, either. Baker believes, for instance, that the nation will continue to be faced with periodic recessions. This will surely be true even in the "soaring sixties," he reckons. Nevertheless, he's dead-sure that the overall long-term growth of the company and the nation is inescapable.

You can be sure, too, that recessions won't deter the long-range expansion plans of National Gypsum. Baker doesn't think there'll ever be another depression like the 1930s, but he notes with justifiable pride that the company experienced one of its periods of greatest growth in that decade.

The onrushing boom of the 1960s isn't something that Baker and his associates have just become aware of by any means. Much of the tremendous expansion of the 1950s was undertaken with full knowledge of the forces for growth that have been building up for years.

You've seen how National has charted the swelling population; plotted the areas of the most significant new markets; calculated rising incomes; streamlined its organization for efficiency; and acquired gargantuan new deposits of raw materials. All of these steps, and others which you'll learn about, were taken with an explicit plan in mind.

It's laid out with precision and care in a detailed ten-year blueprint for expansion and progress that taxes the imagination of those who are not familiar with the sheer magnitude of the forces that impel it.

So strong are those forces that National Gypsum has blueprinted a staggering $275,000,000 for capital expenditures in the decade of the 1960s. Sound unbelievable? As a matter of fact, National thinks the figure is quite conservative. Consider, if you will, the fact that National spent $27,500,000 on capital expenditures in 1959.

As a starter on that $275,000,000, National has spelled out a five-year capital expenditures program to cost $125,000,000, the most ambitious in the company's history, beginning with a $25,000,000 outlay this year, 1960.

You might wonder what sort of projects fall into the capital expenditures category. For National's purposes they include additional plants, expansion of existing plants and plant improvements which help cut costs or improve quality.

In fact, the first expansion move of this decade was made when National acquired the Union Gypsum Company of Phoenix, Ariz., in the Spring through an exchange of more than $4,000,000 of its stock.

As the company's acquisitions go, it wasn't a large one but under the surface there was a heap of consequence. It represented a hurdling of the Rockies for the company—National's first gypsum plant in the Far West.

This invasion of the Far West was no hasty decision. Way back in 1947 stockholders were informed that "attention will be directed to the development of gypsum on the Pacific Coast where the company has been unable to compete with local manufacturers because of high freight into the market."

During the coming decade that opening wedge into the Far Western market for gypsum products will be driven in a lot deeper. Just how this new market will be opened up to the company will be determined at the precise time it is felt that additional capacities can be absorbed in that region. It should be noted that the company owns a mountain of gypsum on the southern tip of California that it acquired some years ago for future development.

The fast-paced tempo of National's expansion for the markets of the 1960s was highlighted just a week after the completion of the acquisition of Arizona's Union Gypsum Company. It came with the significant announcement that site and foundation work had been started for a large new gypsum-products plant at Port Tampa on Tampa Bay, Fla. It will be the most modern plant of the National Gypsum Company.

Long months of study and market research had shown that a gypsum plant was needed to supply Florida's booming building industry. Moreover, the company will be able to affect substantial savings over the present method of shipping gypsum products into Florida from the big Savannah, Ga., plant. Furthermore, it will mean overnight service to National's Florida customers.

The Florida plant, the company's first in that state, will be supplied with gypsum ore by the fleet of ocean-going freighters from the vast Nova Scotia deposits.

The market for gypsum products in Canada has been a fast-ripening one that for years has fascinated the company leaders. This also is part and parcel of the ten-year blueprint.

Now, plants in Canada could be supplied with raw gypsum ore from Nova Scotia or the quarries at Tawas City in Michigan. But for the growing market in the vicinity of Toronto, Ont., National has other plans. After spending about $100,000 exploring for gypsum in that area, National found it recently in massive quantities.

A plant there is just a matter of timing. And as population growth justifies the large capital outlay required, the company is planning to cover all of the major markets of North America with gypsum products.

And then there's cement. It's a lot like gypsum in a way. It's bulky and you can't compete cost-wise in markets that are distant from the plant because of high freight costs. Presently, National's cement market for its Huron Portland Cement is limited to areas bordering the Great Lakes. During the 1960s National has charted an extraordinary broadening of this sales territory with massive new manufacturing

capacities to cover areas it does not serve now. Target for cement: Nation-wide distribution.

Further integration hasn't been overlooked in the long-range ten-year plan, either. As the network of gypsum plants grows, there will be additional plants to produce more paper for the "sandwich" that is gypsum wallboard.

And perlite. That's an aggregate that's used in making plaster. Before too long the company expects to acquire a deposit of perlite and mine it in volume. Once again, the plan will be to effect savings in perlite, which National now purchases from outside sources.

You might not think that a building-products manufacturer would be much interested in paper bags and cardboard boxes. Actually, it's calculated that some time before 1970, there will be a need for a good-sized plant to produce these products.

The quirk in this product line is that National uses mountainous quantities in packaging the building products it makes. When such a plant is built, it will be planned to show an attractive return on the investment over the present method of buying paper containers.

Then there's ceramic tile, a growth industry in its own right. As this market expands further, it will call for additional tile-manufacturing plants.

In fact, you can tick off the other major product lines one by one and be virtually certain that if new capacities aren't built or acquired, the existing facilities will be expanded. From mineral-wool insulation and lime and asbestos to paint and insulation board and metal and acoustical products.

The driving forces in the economy at this very moment are sketching the broad dimensions of growth. It remains for the voluminous ten-year master plan to fill in the details.

The Big Plan is not a dream, a misty vision. Its authors know, as John Galsworthy once wrote: "If you do not think about the future, you cannot have one." They know, too, that the business of making forecasts, even though they are buttressed by carefully-researched statistics, is at best a kind of rough hewing of a pattern for the future.

The Plan is not something that's tucked away in a musty file but rather it is almost a living thing that is nurtured and coddled and changed as need arises. It's flexible. It plots the company's needs in production, money, manpower for each of the ten years. But realizing the vicissitudes of the economy, the analysts check the Plan each year to see how it squares with the forecasts of population growth and national production and income.

Finally, management is able to ask the big questions: Have we been too modest in our appraisals of our business? Or too optimistic?

Every dollar sign, figure, chart and graph must give a detailed account of itself. You don't miss the boat that way. And you don't live on a day-to-day basis or even from year to year. The tools of the analysts have put today squarely in line with tomorrow. And it is a glittering tomorrow.

Take the picture of the sales prediction for 1970, for example. The curve starts upward gradually and as the years of the decade pass, it gets steeper. By 1970 it is projected that annual sales will be just short of $500,000,000—half a billion dollars. That means that National Gypsum roughly will have to more than double the record sales of more than $226,000,000 in 1959.

It follows that National's management fully anticipates that earnings and assets will roll up similar percentage gains.

If all of these projections sound like fantasies from a science-fiction novel, consider the past which, after all, is a road sign pointing to the future. During the decade just finished, National's sales and assets shot up nearly four-fold and earnings more than quadrupled. And in each of the two preceding decades sales, assets and earnings all more than tripled, despite depression and war.

So when National Gypsum management puts a "conservative" label on its forecasts for 1970, it is just that. Of course, these estimates take into full consideration that inflation still will be with us ten years from now. But at National Gypsum, strange as it may seem, something has been done to offset partially the effects of inflation.

It lies in the simple statement that National has bought

and paid for virtually all of its basic raw materials in today's dollars—enough to last more than a century in most cases. This built-in hedge against inflation is something that does not show up on the balance sheet. It's an uncounted asset.

There's gypsum ore for wallboard and other uses; shale and limestone for portland cement; limestone for industry, agriculture and for some building products; asbestos for asbestos-cement lines; and a tongue-twisting material called pyrophyllite and other special clays for ceramic tile.

"This is our basic business—owning and controlling our own supplies of raw materials," President Manske points out. "This is the way you keep your costs in line . . . this and automation. These things require capital and brains to operate. Our business by its very nature mandates heavy capital investments. Those competing in the business must be good because you can't get into this field on a shoestring."

National Gypsum needed $2,000,000 just to get its foot in the door back in 1925. Last year more than 13 times that amount was laid out in hard cash just for expansion.

It was a near super-human task to come by that first $2,000,000 35 years ago. Imagine the job of supplying $125,000,000 in cash for expansion in the coming five years. It won't be a matter of pounding the sidewalks and knocking on doors. As a matter of fact, National knows precisely how it's going to get that huge amount.

Roughly half of it will come from allowances permitted by the government for depreciation of plants and equipment and depletion of mineral reserves. The rest will be retained from earnings after providing for dividends to stockholders. Additional new public financing for the foreseeable future is out. It won't be needed.

There's still another highway for expansion that National will travel in the years ahead, just as it started to do back in the 1930s. It's the matter of exchanging company stock to acquire other companies. For this and other corporate purposes National has a nest egg of more than 4,000,000 shares of stock authorized but not issued. The green light for management to issue this stock when opportunities arise was given by stockholders earlier.

National has been eminently successful in acquiring companies through an exchange of stock. The reasoning behind such maneuvers is based partly on the precept that two can live as cheaply as one but there's more to it than that.

It would be a simple matter for National to go out and expand and diversify just for the sake of growth. You could chew up that 4,000,000-plus shares of stock in no time at all. But the management knows that corporate marriages should be consummated for sound financial and business reasons only. That's one reason why they're sticking to the building-materials field. "Minding our knitting," as President Manske puts it. That's why they insist that when a company is picked up through an exchange of stock, National must come out on top.

For the financially inclined that means that National's earnings for each share of common stock must be greater after the acquisition than before. National's growth in the past and the potential for the future have made such deals attractive to the selling companies.

The driving forces behind expansion come to the forefront in still another field that has been called America's greatest growth industry—research and technology.

Consider a few of the now-commonplace wonders that research has wrought and brought to the market place just since World War II. There was only a trickle of television sets then; space satellites were a dream; the transistor radio had yet to be seen on store shelves; Salk vaccine was only a prayer on the lips of millions.

Back in 1950 the nation spent less than $3,000,000,000 for research and development. During the 1950s some $60,000,000,000 was laid on the line to make tomorrow better than today.

And in the "soaring sixties" it is estimated that research expenditures will hit a total of $120,000,000,000. The immensity of that amount is evident when you consider that it is a lot more than has been spent for research ever since the birth of the nation in 1776.

Research is sort of like an unfinished detective story but tremendously more fascinating to the architects of the shape

of things to come. The blunt fact of the matter is that National itself is a child of research. Its roots are entwined in research. Without that first stronger, lighter and more flexible gypsum wallboard, created by research, there would have been no National Gypsum.

The assault on the frontiers of scientific knowledge has continued and intensified since those early crude experiments in the kitchen of the first president, Joseph Haggerty. For the decade of the 1960s you can expect to see a vast outpouring of new ideas, new products, new uses for old products from the laboratories of National.

Existing products will be given a new injection of sparkle and appeal. Indeed, the whole research effort will be directed at infusing extra fizz and bubble into the broadening market for National's products.

Chairman Baker phrases his convictions on research this way: "We believe the 1960s will see a revolution in the technology of construction. There is every reason to believe it will be an age of innovation unequalled in the history of mankind. By the end of the decade, our businesses will have changed drastically. By 1970, many of today's products and methods of operation will seem as outdated as those of the 'sweat-shop' era now appear to us."

For a glimpse of some of the magic in store in this age of innovation take a look behind the scenes of National's huge Research Center in suburban Buffalo, N. Y. There, a staff of about 100 men and women, 60 of them graduate engineers in chemistry, physics and construction, are caught up with the relentless logic of scientific creativity.

"The home of tomorrow will be a far better product than we see today," says Dean Crandell, National's vice president for research.

"The concept of home building is changing. We expect to see, for instance, a lot more home components prefabricated and trucked to the site of large projects where actual labor will be minimized."

As a matter of fact, Crandell points out that National Gypsum's research people are up to their necks in the development of a totally new type of house that's in the works

down the road a bit. It will not have any wood framing, no studding.

The idea is that large "industrialized" panels will have their own built-in strength and exterior and interior surfaces. Insulation will be built in, sandwiched between the inner and outer skin. Even now such panels can stand tremendous loads, far more than conventionally-built walls.

Then there's another project in which National has a hand that gives promise of a home without a furnace for the coldest climates. It's still in the hush-hush stage but it can be said that the system is electronic in concept, revolutionary in nature and provides for heat to emanate from the actual walls of the house.

You can expect, too, breath-taking advances in plastics for the construction industry, a new field for National. An entirely new $400,000 building, devoted wholly to research in plastics in the building field, was completed in the Spring of 1960 next to the main Research Center.

The pace of research is being stepped up in the subsidiary divisions as well. For ceramic tile, research is being pushed with a brand-new, modernly-equipped laboratory at Lansdale, Pa. Cement is getting the same treatment, with a new research laboratory building at Alpena, Mich.

These two facilities for ceramic tile and cement are further evidence of the decentralization policy that has been established for the subsidiary companies. Each is possessed with well-seasoned management, and, as Baker notes, "they're all our kind of people."

Exploration into the unknown over the years has produced a torrent of new and improved products. For the man or woman with a yen for the home, they hold forth just as much glamour as the launching of a space satellite. Let's look at a few of the more recent scientific surprises of research at National Gypsum.

You've heard about Durasan, the industry's first vinyl-coated wallboard that's tough to scratch, easy to wash. Comes in different colors, too. Then there are the truly unusual new asbestos-cement siding materials that are covered with a tough plastic coating. There's a new sprayed-on

plaster that gives protection of up to four hours in case of a fire to walls and ceilings in any type of building and with a single application.

New wood-fiber ceiling tiles sop up annoying household noises. Intensive research in the booming field of acoustics has resulted in another unique product. It's a washable acoustical tile covered with a plastic membrane that has the same noise-suppressing value as regular acoustical products.

In still another building field National has researched and developed two products that could revolutionize the yearly cycle of heavy construction by permitting the pouring and hardening of concrete during icy winter weather. Made of insulating material, they are placed over freshly-poured concrete walls or floors and can be re-used many times.

When laymen pause to think of the meaning of research, they may conjure a vision of men with their heads in the clouds, but at National the word has another meaning. Products developed by National's researchers and introduced during 1958 and 1959 contributed more than $5,000,000 in sales in the latter year.

Take note of the point that of the more than 300 building products that the company makes, many of them hadn't even been heard of before World War II. Big business, this research!

So there you have them, the three relentlessly-compelling forces that underlie the fantastic growth potential for National Gypsum in the coming decade and thereafter. The tremendous population surge with its curious built-in twist of a spurt in the number of young marrieds . . . the impulse of research to create a soaring curve of technological progress . . . a demand for new construction that is nothing short of fantastic.

This decade, as Mel Baker described it not long ago, will add up to "ten years of unparalleled building." In dollars, he estimated it will run to $600,000,000,000 or more than the assessed value of all private structures now standing in the entire nation.

Add to that new construction the sizable, but often overlooked, remodeling market that now amounts to about

$15,000,000,000 annually. By 1970 it is estimated conservatively that it will jump to about $25,000,000,000 a year.

In other words, ten years hence the construction industry will be a third to a half larger than it is today. National figures to do a lot better than that. After all, hasn't its rate of growth—decade by decade—always been considerably higher?

The imperative demands of the construction industry, coupled with National's ambitious expansion programs, virtually outline the widening dimensions of its markets of the 1960s and later on. For a widely diversified company serving the building industry, it is only natural that the total market breaks down into a number of individual and growing markets.

And there's a fascinating lure in each of these markets to intrigue anyone from the businessman and investor, who may want an understanding of the breadth of the individual markets, to the housewife interested in learning what's new in the home field.

National actually has been a prime mover in the creation of many of these markets as they stand today. Take this example. In the beginning, the company was reaching for a relatively small share of the home-building market with its lighter, stronger, more flexible wallboard. It put the company in a strong position but eventually all other producers found a way to approximate the qualities National was offering. Thus, a new standard actually was established for an entire industry that assisted it to grow to its present stature.

Another National "first" was the increasingly popular wallboard with a surface that simulates the grain and color of various decorative woods.

Then there is plaster, which is actually made of gypsum. Through research, National found a way to "cook" the raw gypsum to produce a better plaster at no higher cost. National expects that others will get around to making a similar improvement but is satisfied with the leadership that comes from being first.

Plaster, of course, is applied over gypsum lath or metal

lath. When National entered the metal-lath business, it wasn't satisfied to turn out the same sort of product that others were making. Research was applied to the problem and a superior product was the outcome. It helped to sell more plaster, too.

Back in the late 1930s when fiber insulation board was coming into general use, National found a place in that market with a new, lower-cost process that utilized second-growth pine which was shredded into coarse fibers and matted into wallboard. Then came more acoustical ceiling tiles and roof decks.

Paint was another natural. The paint company that was acquired was among the first to make the so-called "rubber base" paints. As you might expect, the line was broadened to include interior enamels for woodwork, an exterior paint and a waterproofing coating for basement walls.

The same cold reasoning was applied when National entered the asbestos business. In those days asbestos siding and shingles, with their great virtues of guarding against fire and decay, were produced in a colorless, unattractive manner. Then came new textures and lively colors. More new markets.

In fairness, National does not claim credit for all these improvements but it was the first to come up with a plastic coating to do away with fading of asbestos products.

Even more fascinating is the market for ceramic tile that National entered with the purchase of three progressive old-line companies with reputations for fine craftsmanship. The art of tile making goes back nearly 7,000 years but it took a heap of research to boot it out of the luxury market into the mass market.

New cost-cutting techniques and materials, coupled with the building spree, have skyrocketed industry sales of ceramic tile nearly 150% in about the past ten years.

National stands all by itself in one phase of the huge tile-making industry. A subsidiary owns all known deposits of a special clay that gives certain types of tile an extra-smooth glazed surface.

National's plants turn out a veritable supermarket of

tiles in an almost-endless variety of colors, styles and sizes. National figures that there will be a big spurt in the use of ceramic tile in homes in the years ahead, a trend which already is well under way. Tile is moving outdoors in increasing volume, too, as a decorative and hardy facade for all sorts of buildings.

Still another old timer in modern garb that electrifies the market-wise men of National Gypsum is cement, a crude version of which even was used by Caesar's legions.

By any standards the industry is a whopper and National's Huron Portland Cement plant at Alpena, Mich., is the world's largest. Glance at the enticing market for this remarkable product.

It has been estimated that the ravenously-hungry construction industry will chew up a staggering 535,000,000 barrels of cement in 1970. Industry production of cement this year will amount to an expected 330,000,000 barrels.

America virtually is built on a foundation of this mineral "glue" from which concrete is made, and the foundation is getting larger by the minute.

Highways, buildings, bridges, dams, jet-bomber fields, harbors, factories all begin with cement. So do homes, schools, many backyard barbecue grills and patios.

It is no wonder that National Gypsum entered the cement field. And its plans for broadening its markets for this star of the construction industry are classic in their simplicity.

In addition to all of these products directed at specific markets in construction, National's own raw materials have found wide usage in other industries. Raw materials owned by the company and processed for others include gypsum, lime, asbestos and pyrophyllite which are sold to industries such as steel, paper making, plastics, chemicals and even portland cement. Gypsum and lime also have found extensive use as "land plaster" for treating soil.

Here, then, is the definitive shape of the master pattern as it was started 35 years ago—from a single product for a single market to more than 300 products for many individual markets. Here, too, are the bed-rock foundations

that have been emplaced for new peaks of prosperity in a never-ending procession of tomorrows. Men and women who are able to rise up straight and tall can look to those distant horizons and with vision and faith translate them into a new and better America.

Chapter Six

"Civilization is not what your ancestors have built, but your capacity to build—intellectually and spiritually as well as architecturally."

ELMER DAVIS

YOU WALKED INTO THE OFFICE of the Chairman of the Board. He had spotted you coming through the door of the outer office which led to his secretary's bailiwick. The doors had been open.

The secretary smiled pleasantly but she didn't stop you with the usual questions about "appointments." The Chairman of the Board was on his feet with a warm greeting long before you reached his desk.

You had finished writing the story of the company he helped to found nearly 35 years earlier. Sure you were impressed. You had to be. How many companies can you think of that grew from a hole in the ground to a point where they had 60 plants and assets of more than a quarter of a billion dollars in a mere 35 years or a bit less? Not a one, I'll wager. Or, at least, I couldn't offhand.

You had spent months burrowing through files and records, listening to tape recordings, interviewing dozens of men and women. You thought you "knew" the company. But there was a gnawing thought in the back of your mind that you had missed something.

Surely, you wondered to yourself, a company such as this is something more than plants, and mines, and quarries, and ships, and office buildings. Was it personality?

You told the Chairman of the Board of your thoughts. He lit a cigarette—he's a chain smoker, you know—and leaned back in his chair. He was silent for a few seconds and then sat upright, swiveling his chair to face you.

"I think you're probably trying to get at our corporate image," he ventured. "We don't usually call it that when we're talking about ourselves to others but it's a pretty important matter to us in all of our many relationships. I suppose you could call it our profile or our personality but when you get down to cases, it's the image other people have of us in their minds."

You watched him closely as he spoke. At 74, he seemed to have the vigor of a man half his age. His eyes sparkled and he spoke with the soft voice of a man who had been in the driver's seat for a long time.

He told you that the corporate image of National Gypsum was a many-sided affair. It all depended on whose image of the company you were talking about. The stockholder has one picture of the company, the banker another, the employee still a different one, the customer yet one more and the ultimate user of the products even another.

The Chairman looked up suddenly as though he had just remembered something from the distant past.

"I think I've got just the thing you're looking for," he remarked as he quickly riffled through a file of papers in a desk drawer. In a matter of seconds he withdrew an obviously time-worn, ragged-edged sheaf of papers.

"It's an address I read at our first sales convention back in January of 1927," the Chairman said with an air of pride tinged with humility. "Joe Haggerty wrote it. Our first president."

He handed you the document, almost reverently. It was obviously a cherished record. You glanced at it hastily. Then you looked more closely—for perhaps a long minute. You thought that this might be just what you were driving at when you walked into the Chairman's office.

Here in a nutshell was a large segment of the corporate image of this company. Too good to pass up, you thought, asking the Chairman's permission to borrow it.

"Certainly," the Chairman replied, "but don't you forget for a minute that the things I talked about in that address are still on the books today. Maybe even more so. But you can see for yourself just how well we've followed those ideals over the years."

Well, this little document is called "People, Product and the Dealer." It starts off by telling you that when the three founders started the company, they were ambitious to create the most successful business that had ever been built. You read that they tried to look far into the future and set their objectives and chart their course with reference to those objectives.

Then it gets down to the nub of this idea of corporate image:

"Now just what is our idea of success? Is it profit making? Not necessarily."

You wondered about this and then you read a little farther and you found the answer:

"The successful business must make profits. The expansion of its finances is dependent upon a good profit showing but there are businesses making profits that are not successful because they lack the good will of their trade and their organization and must eventually pay the price. The real successful business, in my opinion, seeks not alone at the start but ever and always the good will of its trade, its employees and its investors. It never considers any one interest as divorced from the others but rather as each having a vital place in the building of the company."

You were curious about the relationship between these factors and how they are reflected in the corporate image. Then you spotted these points:

"Whatever we may think of the part the investor and the organization play in the chain, we can still all see quite plainly the importance of our customer. He gives us the business that represents the fuel that energizes growth. What he thinks of our product is all-important. In the last analysis it is the thing that will make or break us.

"Under the circumstances it would be suicidal to do other than court the good will of the trade. It would be

very foolish to do anything at any time, whether now or in the remote future, to antagonize him and endanger in any way the highest type of relationship."

You refreshed your memory on the date the talk was given—January 3, 1927. You remembered that the company had been in production with a single plant and a single product for less than seven months. Then you related these high ideals expounded then to the company's position today. The words took on a new meaning:

"But a product may be ever so good and if it is merchandized under a policy unfair to the dealer, it will never find the expression in use to which it otherwise would be entitled. The dealer must give it his enthusiastic support. And how can he do that if he is never sure of his relationship with the manufacturer? For this reason we must see to it that our promises are always fulfilled."

You read on and found mention again of investors—a fervent plea that "our promise either implied or specific" to them will not be forgotten forever more. And then there's something about never forgetting the relationships between stockholders, organization and dealers and that if each has the long pull in mind, "there should be no difficulty in keeping each happy."

When you read the concluding paragraph, you knew that this wasn't just a "sales talk" to be forgotten after a bit of refreshment:

"I have purposely expressed myself at length in order to place on record some of our objectives. I think we have all understood them and know of their existence. I think it is well to have something in record form that we can refer to and look back upon from year to year and check our performance lest we stray even a little bit."

Clearly, this did not smack of the public-be-damned attitude of many businesses of another era. Nor was there any hint of unfeeling mandates pouring from a behind-closed-doors management. You could easily see the open-door policy here.

And then you inquired what the Chairman thought of the lampooning big business in general was getting at the

hands of some business novels, TV dramas and movies in recent years. It turned out he was well aware of this public whipping and the greed and ruthlessness that big business sometimes is pictured as having.

"Hog wash," he said emphatically with a trace of irritation in his voice. You remembered he has heaped ridicule on this defamation of the character of business in the past.

"These books and plays leave the impression that the businessman operates in a moral vacuum. He appears to be without a code of honor. If he is not a downright demon, he is a pathetic picture of a man caught in the web of his own selfish system."

The Chairman knows all this is absurd but he wonders if the public and employees understand it. He does know, though, that the tycoon overlord is a creature of the past and great businesses that once were owned by families had assumed a new statesmanship that went hand-in-hand with public ownership. All this means, he says, that to operate successfully today, a business must justify itself on the basis of how well it is able to deal with the public, its employees, stockholders and the trade.

You asked the Chairman if this meant that a company must adjust its thinking to "sell" successfully in today's market.

"You bet your life it does," he replied pointedly. "The only businesses that will make a go of it today are the ones that play square with the public, their employees, their stockholders and the dealers. All businesses are competing for the good will of each of these groups and I think you'll agree that we've done a pretty good job of it. Heaven knows, we've tried hard enough."

The Chairman removed his glasses and lowered his head a moment as though searching for an elusive thought. He looked up and said in a muted voice:

"You know, ever since the year we started this business, quality of our product and our service have been hallmarks of our corporate image or profile—call it what you like. In so many, many ways they are a sort of mirror that reflects the thinking of our people and their character. The trouble

today is that too many businesses think quality is an old-fashioned word. In our own business we know that the ideas of quality we adopted nearly 35 years ago resulted in a whole industry changing its product standards."

You almost felt the presence of people when he talked. Many people. So you asked the Chairman how people fit into his concept of quality. He smiles broadly and says he was inquisitive to know when you were going to get around to that point. You heard that he liked to talk about people, his own people in particular—11,000 strong. The dynamic force for the future of the company, he calls them.

Once again the Chairman opened a desk drawer and out came a little black book. You had a fleeting vision of a "blacklist" but he set you straight pronto. Quite to the contrary, it contains a list of more than 100 bright young and middle-aged men who are "on the way up." There are managers in the departments in the home office, managers in the plants and in the district sales offices.

But it's more than just a listing. There is a host of details on each man—his early background, the story of his experience, and specific achievements.

This, you knew, was part of the company's team philosophy of management and the importance of the individual to the team. Take a top professional football club, for instance. It's got first teams on offense and defense. And then there are reserves, a lot of them.

Of course, a team as large as National's is a lot bigger than a football squad. But more than that, it's got great depth in management—second, third and fourth levels that are ready to move up a notch on a moment's notice.

The concept really is quite simple, the Chairman informed you.

By bringing in groups of smart young men each year, training them and then guiding their progress up through the ranks, you are assured of a never-ending succession of management. And because of the rapid and continuing expansion of the company, it has always been able to attract the more ambitious who knew they could grow in stature and experience.

The smart young men apparently have liked what they found at National because, as the Chairman pointed out, after they've been with the company two or three years, hardly a single one ever leaves.

"If you want an image of our company, take a look at our first team of officers," the Chairman continued. "Every single one of them worked his way up the ranks. Not a one of them started at the top or anywhere near it."

You knew most of these men and you could see what he was getting at. Many of them, of course, have come in for attention earlier—men of towering stature such as President Manske and Vice Presidents Masters, North and Crandell. They'd be first stringers on anybody's management team.

But there are many others. Take the three vice presidents who are responsible for various segments of the sales picture. All had started with the company as pavement-pounding salesmen.

There is Melvin F. Cerruti, the vice president for building product sales, who got his start back in 1928 through a phone call from Boston to the man who is now chairman in Buffalo. You remember a little story that Mel Cerruti had told you about the time F. D. R. closed the banks in 1933.

It seemed everybody's pay was cut 20% immediately. The reduction lasted only six months but the point that impressed Cerruti was that at the end of the year everyone received a check for the pay they had lost. No wonder men and women come to National Gypsum and stay.

Then there's Wade W. Hildinger, who came to National fresh out of college in 1942 as a salesman, and worked through the ranks to become vice president for marketing.

"We recognize the importance of sales and these younger men may well lead the next regime in management," the Chairman said significantly.

And then take John W. Brown, a master of relations with the trade. He sold bricks in Kansas in the days when there were few paved roads. Brown came to National in 1935 as a salesman and ascended to the position of senior vice president for sales.

The need for management in production and related functions wasn't overlooked, either. Leonard L. Hank, with his great skill in organizing and administering all of the elements involved in production, is a leader on the team as vice president for operations.

Management recognized the unusual talents of Eugene W. Odenwaldt in the field of building product quality and paring costs. He's now vice president for manufacturing, although he's been with National only since 1950.

Tied closely to these two men is S. David Skinner, whose genius in engineering has been responsible for designing virtually all of the company's plants that have been built since World War II. He carries the title of vice president for engineering and has been in various engineering posts ever since he came to National in 1939.

Then there's Walter S. Corrie, treasurer, whose high standards and influence permeate the entire organization. He was one of the men who were with the three founders of National in the days of the old Beaver Products Company. In fact, he served with that company nearly 15 years, joining National in May, 1928.

His crystal-clear memory goes back to the times of the one-room office headquarters—"when everyone knew when we received an order because someone always stood up and announced it" . . . "the seconds that seemed a year when Ralph Burley did a juggling act at a company picnic and one of his oranges fell in Mel Baker's coffee, splattering his white suit. Mel just laughed."

You can round out the first team with youthful Douglas B. Littlewood, who serves as secretary, and Richard H. Means, who began as auditor in 1942 and is now controller.

Thinking of all these men, your mind drifts back a few weeks to something one of the vice presidents had told you. His feet were up on his desk as he talked and offered you a cigar. Made you feel at home. He was telling you that all through his years in various positions with the company he had always felt that the business was partly his. It wasn't because of stock ownership, but more like a feeling of warmth that engulfed him in his daily chores. He had said

you couldn't help but feel that way because, after all, hadn't every single executive worked his way up on ability alone. You get a sense of proprietorship that way. Moreover, you understand the problems of men and women in the ranks because you once had the same headaches yourself. It's all part of people growing with a growing company.

Manifestly, this was a company cut from no ordinary fabric. It didn't conform and accept the hard-headed standards of a run-of-the-mill business. It preferred, instead, to rely on the exciting and creative initiative of the individual and its own corporate conscience.

You mention this thought to the Chairman and his eyes light up as though he had been given fuel for a whole new train of thought.

"Of course, you understand that this is a company dominated by a small-town point of view," he replied quietly. "By that I don't mean that we think small but that we're down to earth—closely tied to reality. And you're right, we don't conform in the ordinary sense."

He's telling you now about how a company can literally die on the vine if new ideas and creative thinking are squelched. He says there's too much thinking today that The Group is the only wellspring of a decent new idea. "Corporate conformism," he calls it.

The Chairman mentioned how he abhors detail work and said this is as it should be for all business. Don't make any decisions on one level of management that can't be made on a lower plane. It encourages decision making among the junior executives.

"In our business you might call it a type of on-the-job training in making decisions," he continued. "You take a bright young fellow you're just bringing into the business. After a while and with some patience and ability he becomes one of your younger executives. Now if that fellow had been trained to think of your system as just about perfect—had no experience in making any decisions to change it for the better—just what kind of a man would he be to run a business?

"Oh, we all know a business has to have recognized

standards—and your quality has to improve right along—but when the whole matter is reduced to deadly routine, creativeness and initiative fly out the window. You don't grow that way."

The Chairman paused a moment and chuckled. He was thinking of a caricature he had seen of a desk-thumping executive surrounded by a covey of "yes-men" who carried out stacks of hard rules and regulations from the ivory-tower office.

The Chairman said he thinks big business has been whipping this so-called scientific management horse too long and it's high time more top managements turned to the development of human understanding.

"I've never been more sure of anything in my life," he said with firm conviction. "You just can't imagine what tremendous forces for the better can be released just by giving a little more attention to the basic needs of the worker as a human being. We spend a lot of time trying to convince our employees, our customers and the public that we're human beings, all living and working as a team to earn a better way of life."

Then he was saying that even in dynamic changing times such as these you had to stop once in a while and reflect quietly on the values that had brought you to your position of pre-eminence. There had to be perspective to provide direction and guidance for growth. Only in this manner could you envision and create new horizons.

Frontiers are not vanishing, he went on reflectively. The old ones may be gone but there are new and more challenging frontiers for the men and women of character who can see them and are not of faint heart. They'll be conquered by those who labor for the supreme joy of having achieved something worth while.

"The task of our nation and our own people as I see it is to lift our sights, to gear our thinking and planning for the future. If we do this well and make no large mistakes, the future surely will be a glorious one."

The Chairman seemed to be saying that the interview was at an end. You thanked him and left the office. As you

turned a corner you happened to glance back. The Chairman still was sitting in his chair and he seemed to be absorbed in deep thought.

Somehow you felt he could almost see the "glorious future" he had been talking about. It was just over the horizon but it could be reached by men of vision and courage.

Appendix

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National Gypsum Company & Subsidiaries • STATEMENTS OF CONSOLIDATED INCOME AND BALANCE SHEET

Years Ended December 31

	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950
NET SALES	$226,277,806	$163,164,450	$141,472,977	$151,859,497	$148,219,476	$126,648,984	$116,871,438	$ 99,130,386	$95,489,963	$75,990,039
OTHER INCOME	2,053,309	1,274,950	2,334,674	1,900,595	1,279,530	2,329,439*	1,743,322	1,695,938	2,015,802	419,277
	$228,331,115	$164,439,400	$143,807,651	$153,760,092	$149,499,006	$128,978,423	$118,614,760	$100,826,324	$97,505,765	$76,409,316
COST OF PRODUCTS SOLD AND OTHER CHARGES										
Cost of Products Sold	$150,107,369	$110,121,820	$100,138,213	$106,099,991	$ 99,426,427	$ 85,595,963	$ 81,788,846	$ 68,382,806	$ 67,877,491	$ 50,059,002
Selling, Administrative and General Expenses	25,892,980	19,587,488	16,098,177	16,517,648	16,070,099	14,943,024	14,419,403	11,920,857	8,928,178	7,449,875
Interest on Long Term Debt	1,417,332	1,133,750	1,068,750	1,068,750	1,068,750	1,068,756	1,084,957	742,107	531,956	424,073
Other Charges	771,755	1,021,629	1,316,569	885,904	1,454,389	1,609,090	737,705	219,506	158,712	251,601
	$178,189,436	$131,864,687	$118,621,709	$124,572,293	$118,019,665	$103,216,833	$ 98,030,911	$ 81,265,276	$77,496,337	$58,184,551
INCOME BEFORE TAXES THEREON	$ 50,141,679	$ 32,574,713	$ 25,185,942	$ 29,187,799	$ 31,479,341	$ 25,761,590	$ 20,583,849	$ 19,561,048	$20,009,428	$18,224,765
TAXES ON INCOME										
U. S. Federal, Canadian and State	$ 24,580,000	$ 16,960,000	$ 12,395,000	$ 14,924,271	$ 15,715,651	$ 12,617,462	$ 12,762,526	$ 12,311,568	$12,613,445	$ 8,938,237
NET INCOME	$ 25,561,679	$ 15,614,713	$ 12,790,942	$ 14,263,528	$ 15,763,690	$ 13,144,128*	$ 7,821,323	$ 7,249,480	$ 7,395,983	$ 9,286,528

** Includes Non-recurring Profit on sale of all the capital stock of a wholly-owned Canadian subsidiary $1,028,798*

ASSETS

CURRENT ASSETS										
Cash	$ 9,739,182	$ 8,715,340	$ 7,822,403	$ 9,276,339	$ 9,901,369	$ 7,912,746	$ 10,241,283	$ 8,955,518	$ 6,188,509	$ 6,096,806
U. S. Government Securities	19,137,028	17,448,137	9,137,473	5,718,744	14,519,574	17,279,934	12,983,351	6,977,634	4,544,104	5,948,166
Receivables	22,412,650	19,463,808	14,267,431	13,132,524	15,328,113	12,886,575	11,919,872	10,742,428	8,350,840	7,754,704
Inventories	26,298,440	17,124,567	17,006,038	17,260,394	16,763,049	14,378,639	14,067,259	15,060,119	12,646,887	9,214,121
TOTAL CURRENT ASSETS	$ 77,587,300	$ 62,751,852	$ 48,233,345	$ 45,388,001	$ 56,512,105	$ 52,457,894	$ 49,211,765	$ 41,735,699	$31,730,340	$29,013,797
ASSETS APPLICABLE TO COST-PLUS-FIXED-FEE CONTRACTS	—	—	—	$ 491,285	$ 519,183	$ 558,083	$ 2,544,036	$ 3,350,199	$ 2,979,458	—
PROPERTY, PLANTS AND EQUIPMENT										
Total Properties and Equipment	$267,485,573	$182,987,745	$159,877,549	$147,828,835	$125,135,446	$ 94,967,862	$ 83,479,970	$ 74,868,879	$69,136,266	$57,882,313
Less Allowances for Depreciation and Depletion	96,954,815	61,690,311	50,546,928	42,998,492	36,244,594	31,086,080	25,669,767	21,240,925	17,477,378	14,848,883
	$170,530,758	$121,297,434	$109,330,621	$104,830,343	$ 88,890,852	$ 63,881,782	$ 57,810,203	$ 53,627,954	$51,658,888	$43,033,430
Construction Fund	—	5,766,020	15,038,414	18,240,184	—	—	—	—	—	—
	$170,530,758	$127,063,454	$124,369,035	$123,070,527	$ 88,890,852	$ 63,881,782	$ 57,810,203	$ 53,627,954	$51,658,888	$43,033,430
PREPAID EXPENSES, INVESTMENTS AND OTHER ASSETS	$ 2,814,656	$ 2,133,169	$ 2,311,462	$ 2,304,836	$ 2,152,326	$ 1,929,470	$ 1,925,548	$ 1,748,532	$ 1,539,305	$ 1,605,970
	$250,932,714	$191,948,475	$174,913,842	$171,254,649	$148,074,466	$118,827,229	$111,491,552	$100,462,384	$87,907,991	$73,653,197

LIABILITIES

CURRENT LIABILITIES										
Accounts Payable	$ 5,307,011	$ 4,235,255	$ 3,130,734	$ 3,350,403	$ 6,083,657	$ 3,552,451	$ 3,570,453	$ 3,013,937	$ 3,435,460	$ 2,123,388
Accrued Wages, Taxes and Expenses	7,176,138	3,755,084	2,733,065	2,646,413	3,285,138	2,725,204	1,880,952	1,906,086	1,652,751	1,932,230
Taxes on Income, Less U. S. Govt. Bonds Applied	603,707	1,132,825	374,169	867,578	369,723	1,449,776	1,104,551	691,858	696,550	283,172
Current Maturities of Long-Term Debt	1,656,980	1,604,612	1,425,000	—	—	—	—	—	1,130,417	930,417
Total Current Liabilities	$ 14,743,836	$ 10,727,776	$ 7,662,968	$ 6,864,394	$ 9,738,518	$ 7,727,431	$ 6,555,956	$ 5,611,881	$ 6,915,178	$ 5,269,207
LIABILITIES UNDER COST-PLUS-FIXED-FEE CONTRACTS	—	—	—	$ 491,285	$ 519,183	$ 558,083	$ 2,544,036	$ 3,350,199	$ 2,979,458	—
LONG-TERM DEBT (LESS CURRENT PORTION)	$ 33,092,733	$ 27,384,982	$ 27,075,000	$ 28,500,000	$ 28,500,000	$ 28,500,000	$ 28,500,000	$ 25,000,000	$17,413,750	$13,054,583
RESERVES	$ 424,892	$ 370,686	$ 348,388	$ 379,941	$ 358,659	$ 381,920	$ 552,047	$ 523,837	$ 517,423	$ 468,225
SHARE OWNERS' EQUITY										
$4.50 Cumulative Preferred Stock (No Par)	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$10,000,000	$10,000,000
Common Stock ($1 Par)	5,503,013	4,294,602	3,908,828	3,828,237	3,321,135	2,783,241	2,718,446	2,394,375	2,224,607	2,112,336
Capital Surplus	101,527,914	86,584,642	79,385,997	76,476,787	53,721,265	32,293,853	30,094,020	23,714,387	20,562,459	18,563,391
Retained Earnings	85,640,326	52,585,787	46,532,661	44,714,005	41,915,706	36,582,701	30,527,047	29,867,705	27,295,116	24,185,455
Total Share Owners' Equity	$202,671,253	$153,465,031	$139,827,486	$135,019,029	$108,958,106	$ 81,659,795	$ 73,339,513	$ 65,976,467	$60,082,182	$54,861,182
	$250,932,714	$191,948,475	$174,913,842	$171,254,649	$148,074,466	$118,827,229	$111,491,552	$100,462,384	$87,907,991	$73,653,197

Statements of Consolidated Income and Balance Sheet

Directors and Officers of National Gypsum Company

DIRECTORS

Melvin H. Baker, *Chairman of the Board*

Elmer E. Finck, *Partner, Finck and Huber, Attorneys, Buffalo*

Joseph A. W. Iglehart, *Partner, W. E. Hutton & Co., New York; Director, City Stores Company; City Specialty Stores, Inc.; Jones & Laughlin Steel Corporation; Chairman, Baltimore Orioles, Inc.; Director and Chairman Finance Committee, Columbia Broadcasting System, Inc.*

Lewis G. Harriman, *Chairman, Manufacturers and Traders Trust Co., Buffalo; Director, Cornell Aeronautical Laboratory; Delaware, Lackawanna and Western Railroad; New York Telephone Co.*

Charles E. Masters, *Vice President—Finance*

John G. Cella, *President, Southern Real Estate and Financial Co., St. Louis; Thoroughbred Racing Association of America; American Theatrical Co.; Director, Union Electric Co.*

Fred A. Manske, *President*

Clifford F. Favrot, *President, Carondelet Realty Corp., New Orleans; Director, Whitney National Bank, New Orleans; Southern Bell Tel. & Tel. Co.; Louisiana-Delta Offshore Corporation*

John W. Brown, *Senior Vice President for Sales*

Leonard L. Hank, *Vice President—Operations*

Malcolm A. Schweiker, *President, American-Olean Ceramic Tile Division; President and Director, Keller-Whilldin Pottery Company, North Wales, Pa.*

Paul H. Townsend, *Chairman, Huron Portland Cement Division; Vice President and Director, Detroit Chemical Works; Director, Lake Carriers' Association, Cleveland*

OFFICERS

Melvin H. Baker . . . . . *Chairman of the Board*
Fred A. Manske . . . . . *President*
John W. Brown . . . . . *Senior Vice President for Sales*
Melvin F. Cerruti . . . . . *Vice President—Building Product Sales*
Dean D. Crandell . . . . . *Vice President—Research*
Leonard L. Hank . . . . . *Vice President—Operations*
Wade W. Hildinger . . . . . *Vice President—Marketing*
Charles E. Masters . . . . . *Vice President—Finance*
William M. North . . . . . *Vice President—Corporate Development*
Eugene W. Odenwaldt . . . . . *Vice President—Manufacturing*
S. David Skinner . . . . . *Vice President—Engineering*
Richard H. Means . . . . . *Controller*
Walter S. Corrie . . . . . *Treasurer*
Douglas B. Littlewood . . . . . *Secretary*
Fred A. Wagner . . . . . *Assistant Treasurer*
Adam M. Wyant . . . . . *Assistant Secretary*

DIRECTORS AND OFFICERS OF HURON CEMENT DIVISION

Paul H. Townsend . . . . . *Chairman of the Board*
H. Ripley Schemm . . . . . *President*
Clarence L. Laude . . . . . *Vice President—Sales*
Earl W. Denby . . . . . *Secretary and Treasurer*
William M. North . . . . . *Director*

DIRECTORS AND OFFICERS OF TILE DIVISION

Malcolm A. Schweiker . *Chairman and President of American Encaustic*
Roy W. Schweiker . . . *Executive Vice President of American Encaustic*
C. S. Criswell . . . . . *Vice President—Operations, American Encaustic*
Richard S. Schweiker . . . . . *Vice President—Sales*
Norris E. Phillips . . . . . *President, Olean Tile*
Edward M. Adams . . . . . *President, Murray Tile*
George W. Thorp . . . . . *Treasurer*
Albert P. Braid . . . . . *Vice President—Raw Materials*
Maurice Iserman . . . . . *Director*
William M. North . . . . . *Director*

Thirty-Five Year Statistics

Year	Net Sales	Net Income	Balance Sheet Assets
1925	$ 000	$ 000	$ 774,197
1926	390,039	35,855	2,137,506
1927	1,688,637	114,579	3,107,261
1928	2,241,515	4,619†	3,959,360
1929	2,417,731	558,470‡	4,110,107
1930	2,695,711	51,964	4,048,150
1931	2,608,649	276,991	4,015,940
1932	2,030,802	231,478	2,698,713*
1933	2,049,984	272,751	2,737,723
1934	2,560,766	321,540	2,991,136
1935	4,284,065	532,463	6,501,815
1936	7,661,550	1,018,655	10,715,661
1937	10,159,377	687,428	12,867,403
1938	9,829,872	921,632	16,370,377
1939	13,021,871	1,455,237	18,876,269
1940	16,509,916	1,565,196	20,895,630
1941	24,258,348	1,533,816	25,651,476
1942	22,139,798	1,048,059	25,916,269
1943	21,739,687	973,014	25,546,001
1944	23,982,632	867,861	25,529,125
1945	26,742,095	1,000,616	30,093,541
1946	38,056,822	4,023,952	43,150,557
1947	51,764,236	5,273,120	53,472,073
1948	68,125,235	7,997,976	65,886,960
1949	59,439,883	5,836,707	66,468,425
1950	75,990,039	9,286,528	73,653,197
1951	95,489,963	7,395,983	87,907,991
1952	99,130,386	7,249,480	100,462,384
1953	116,871,438	7,821,323	111,491,552
1954	126,648,984	13,144,128	118,827,229
1955	148,219,476	15,763,690	148,074,466
1956	151,859,497	14,263,528	170,763,364
1957	141,472,977	12,790,942	174,913,842
1958	163,164,450	15,614,713	191,948,475
1959	226,277,806	25,561,679	250,932,714

† Loss

‡ Loss includes $302,897 settlement of patent litigation

* Property costs written down $1,060,074

Distribution of Common Stock

Shares	Number of Holders	Per Cent of Holders	Number of Shares
1 - 10	6,410	21.2	28,756
11 - 25	5,006	16.6	87,989
26 - 50	4,794	15.8	174,487
51 - 100	5,103	16.9	343,838
101 - 125	3,303	10.9	359,732
126 - 200	2,750	9.1	425,482
201 - 500	1,997	6.6	570,082
501 - 1000	443	1.5	299,143
1001 - 2000	187	.6	260,368
2001 - 5000	118	.4	384,001
OVER 5000	124	.4	2,570,042
TOTALS	30,235	100.0	5,503,920

As of March 11, 1960

Of 5,503,920 shares of National Gypsum common stock outstanding, 626,367 shares were traded last year on five stock exchanges indicating a wide interest in National Gypsum Company.

The exchanges on which National Gypsum stock is active in listed trading, and the respective number of shares traded last year are: New York Stock Exchange, 573,800 shares and the Amsterdam Holland Stock Exchange, 3,120 shares.

In addition, the Company's stock is engaged in unlisted trading on the Boston Stock Exchange where 10,280 shares were traded last year; Midwest Stock Exchange, 28,547 shares traded in 1959; Pacific Stock Exchange, 10,620 shares traded last year and the Cincinnati Stock Exchange. The Cincinnati figures are not available since National Gypsum was added to this exchange late in 1959.

The transfer agent for National Gypsum common stock is the Bankers Trust Company, New York and, for preferred stock, the transfer agent is The Marine Midland Trust Company of New York.

National Gypsum stockholders live in every state of the United States and a number of foreign countries. At the Annual Meeting of Stockholders this year, 90 per cent of all outstanding shares were represented in person or by proxy.

National Gypsum Company
Subsidiaries

HURON PORTLAND CEMENT DIVISION,
Detroit, Michigan, Paul H. Townsend, Chairman.

HURON PORTLAND CEMENT COMPANY, 1317-29 Ford Bldg., 615 Griswold St., Detroit 26, Mich., H. Ripley Schemm, President.

AMERICAN-OLEAN CERAMIC TILE DIVISION,
Malcolm A. Schweiker, President.

AMERICAN ENCAUSTIC TILING COMPANY, INC., 1000 Cannon Ave., Lansdale, Pa., Malcolm Schweiker, President.

AMERICAN-OLEAN TILE COMPANY, INC., 1000 Cannon Ave., Lansdale, Pa., Richard S. Schweiker, President.

GENERAL MINERALS COMPANY, P. O. Box 271, Lansdale, Pa., Malcolm Schweiker, President.

MURRAY TILE COMPANY, Lewisport, Ky., Edward M. Adams, President.

NEWFOUNDLAND MINERALS, LTD., P. O. Box N 1196, St. John's, Newf., John E. Boyd, President.

THE OLEAN TILE COMPANY, INC., 103 S. Clark St., Olean, N. Y., Norris E. Phillips, President.

CAROLINA PYROPHYLLITE COMPANY, INC., 1104 E. Wendover Ave., Greensboro, N. C., John E. Boyd, President.

NATIONAL GYPSUM (Canada) LTD., P. O. Box 70, Dartmouth, Halifax County, N. S., Fred A. Manske, President.

NATIONAL ASBESTOS MINES LIMITED, P. O. Box 459, Thetford Mines, Que., Fred Manske, President.

WESCO PAINTS LTD., 2100 St. Patrick St., Montreal 22, Que., Fred Manske, President.

UNION GYPSUM COMPANY, 1414 E. Hadley St., Phoenix, Ariz., Fred Manske, President.

National Gypsum Company
Sales Offices

ALABAMA
Birmingham

CALIFORNIA
Los Angeles

COLORADO
Denver

CONNECTICUT
New Haven

DISTRICT OF COLUMBIA
Washington

FLORIDA
Jacksonville

GEORGIA
Atlanta

ILLINOIS
Chicago
Peoria

INDIANA
Indianapolis

KENTUCKY
Lewisport

LOUISIANA
New Orleans

MASSACHUSETTS
Boston

MICHIGAN
Detroit
Grand Rapids
Saginaw

MINNESOTA
Minneapolis

MISSOURI
Kansas City
St. Louis

NEBRASKA
Omaha

NEW JERSEY
Garwood
Raritan

NEW YORK
Albany
Brooklyn
Buffalo
Long Island
New York
Olean
Oswego

NORTH CAROLINA
Charlotte

OHIO
Cincinnati
Cleveland
Columbus
Toledo

OKLAHOMA
Oklahoma City

PENNSYLVANIA
Harrisburg
Lansdale
Philadelphia
Pittsburgh
York

TEXAS
Dallas
Houston

VIRGINIA
Richmond

WISCONSIN
Milwaukee

National Gypsum Company Plants

GYPSUM

Akron, N. Y.
Baltimore, Md.
Burlington, N. J.
Clarence Center, N. Y.
Fort Dodge, Ia.
Halifax, N. S.
Lorain, O.
Medicine Lodge, Kan.
National City, Mich.
New Haven, Conn.
New York, N. Y.
Phoenix, Ariz.
Portsmouth, N. H.
Rotan, Tex.
Savannah, Ga.
Shoals, Ind.
Tampa, Fla.*
Tawas City, Mich.
Waukegan, Ill.
Westwego, La.

CEMENT

Alpena, Mich.
Buffalo, N. Y.
Cleveland, O.
Detroit, Mich.
Duluth, Minn.
Green Bay, Wis.
Milwaukee, Wis.
Muskegon, Mich.
Oswego, N. Y.
Saginaw, Mich.
St. Joseph, Mich.
Superior, Wis.
Toledo, O.

MINERAL WOOL INSULATION

Alexandria, Ind.
Dover, N. J.

LIME

Bellefonte, Pa.
Gibsonburg, O.
Kimballton, Va.
York, Pa.

INSULATION BOARD

Mobile, Ala.

ASBESTOS

Millington, N. J.
New Orleans, La.
St. Louis, Mo.
Thetford Mines, Que.

PAINT

Good Hope, La.
Matteson, Ill.
Montreal, Que.
Raritan, N. J.

METAL

Niles, O.

PAPER

Anniston, Ala.
Garwood, N. J.
Kalamazoo, Mich.
Newburgh, N. Y.
Pryor, Okla.

CERAMIC TILE

Lansdale, Pa.
Olean, N. Y.
Cloverport, Ky.
Lewisport, Ky.

PYROPHYLLITE

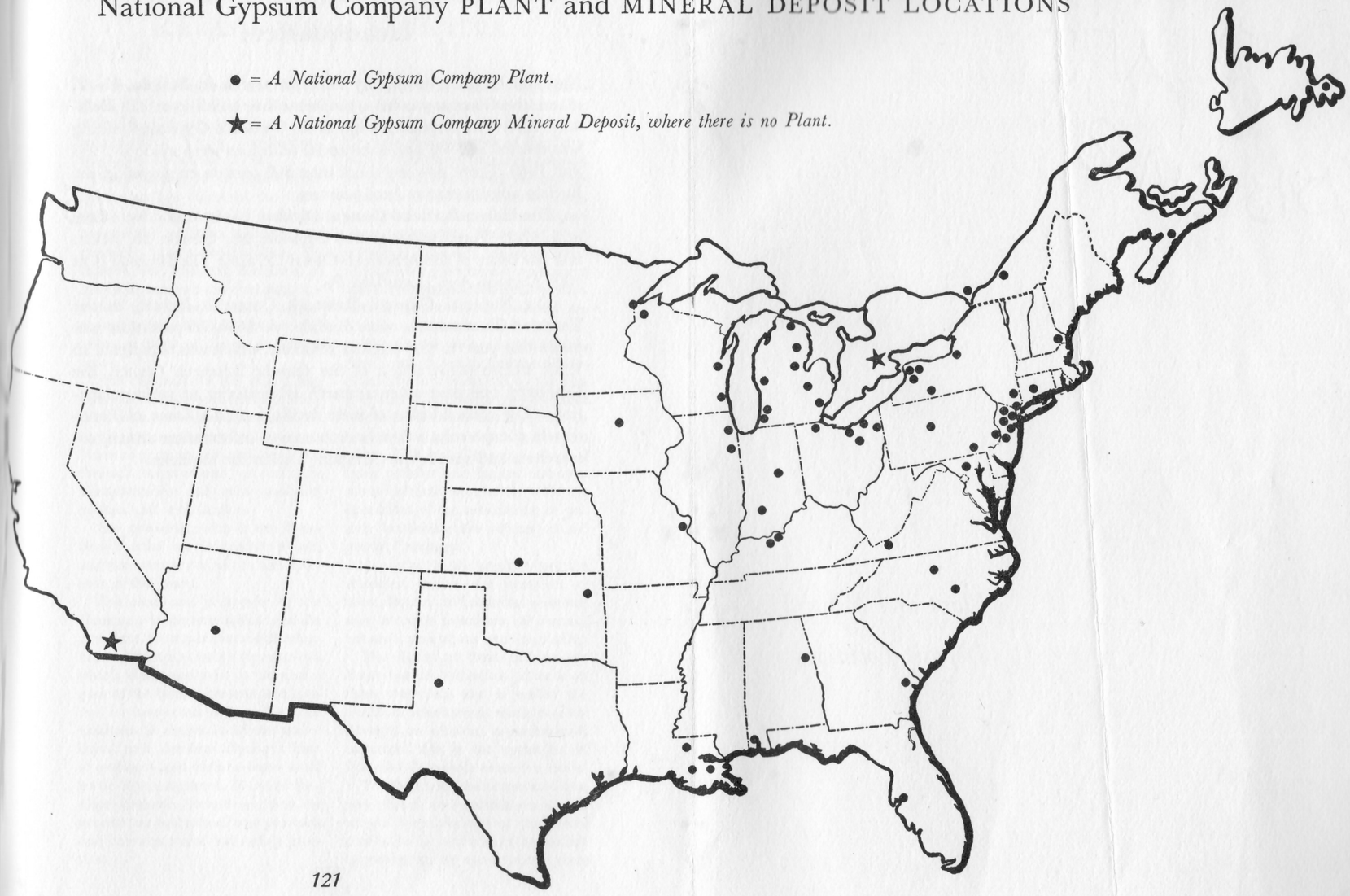
Glendon, N. C.
Greensboro, N. C.
St. John's, Newf.

*Under Construction.

National Gypsum Company PLANT and MINERAL DEPOSIT LOCATIONS

● = *A National Gypsum Company Plant.*

★ = *A National Gypsum Company Mineral Deposit, where there is no Plant.*



Plant and Mineral Deposit Locations

National Gypsum Company Headquarters

National Gypsum Company headquarters is in Buffalo, N. Y. where the Company owns a modern office building at 325 Delaware Ave. The original section of the National Gypsum building was erected in 1941 and substantial additions were made in 1953 and 1960. There now are more than 600 persons employed in the Buffalo administrative headquarters.

The Huron Portland Cement Division has its executive offices at 1317-29 Ford Building, 615 Griswold St., Detroit 26, Mich. and the office of the American-Olean Ceramic Tile Division is at 1000 Cannon Ave., Lansdale, Pa.

The National Gypsum Research Center is located in the Town of Tonawanda, near Buffalo. A $400,000 addition was made this year to the original structure which was completed in 1953. Before construction of the present Research Center, the Company operated seven research laboratories at various locations. The consolidation of these facilities at the Town of Tonawanda site permits a free interchange of information among researchers and speeds the Company's scientific inquiries.

NOTES ON NATIONAL GYPSUM COMPANY ORGANIZATIONAL STRUCTURE

The organizational structure of National Gypsum Company is designed to fulfill efficiently the Company's responsibilities to its stockholders, employees and to the public.

The chairman of the board is the chief executive officer of the Company and, as the title indicates, governs the body that is directly responsible to the stockholders. He controls the financial condition of the Company and exercises final approval of expansion plans, capital expenditures, dividend actions and other matters of financial importance.

The chairman of the board also fosters the means to improve existing conditions, prevent complacency and inspire management to achieve continuous growth of the Company through improvement of products, manufacturing and sales methods, policies and organization.

The president, who is the Company's chief administrative officer, and the secretary report to the chairman of the board.

The continued prosperity of the Company is the responsibility of the president. He supervises the development of a budget for all departments which, when approved by the chairman of the board, becomes the control for operations and profits. The president is chairman of the policy board and develops clear-cut lines of authority and defines duties at all levels of management. He also stimulates research, formulates plans for production and sale of new products and develops sound marketing practices.

The secretary directs the preparation of Company reports and handles all correspondence with stockholders. He supervises the work of the Company's transfer agents and is custodian of the Company seal. He also reviews and offers advice on the preparation of contracts, leases and purchase agreements. The review of all corporate activities to assure compliance with government regulations and the provisions of bylaws, charters, note agreements and contracts are also the secretary's responsibilities.

The liaison with subsidiary divisions, each of which functions autonomically, is maintained by the vice president of corporate development who reports to the chairman of the board. This method of organization allows National Gypsum control of basic policies and capital disbursements without interfering with the operations of the subsidiaries or unduly burdening the officers of the parent Company.

Reporting to the president are the treasurer, senior vice president of sales, director of industrial relations and the vice presidents of finance, research, operations and marketing.

The duties of these officers are many but an indication of some of them may help one to realize the wealth of information, made possible through an efficient organizational structure, that is the possession of National Gypsum's executive ranks.

The treasurer invests surplus Company funds and coordinates the financial requirements of the Company with the activities of the various departments. He also develops plans

and policies for trust fund operations and designates depositories for Company funds.

The senior vice president of sales confers regularly with the president on industry relations, prices, products, advertising and major sales problems. He develops administrative controls for the management and coordination of all sales departments.

The director of industrial relations is responsible for all matters of plant labor and personnel relations training and development, safety programs and wage and hour administration.

The vice president of finance advises concerning costs of operation and sales profit. He develops and outlines accounting and tax policies. The financial phases of all contracts are approved by him and he also makes general economic studies.

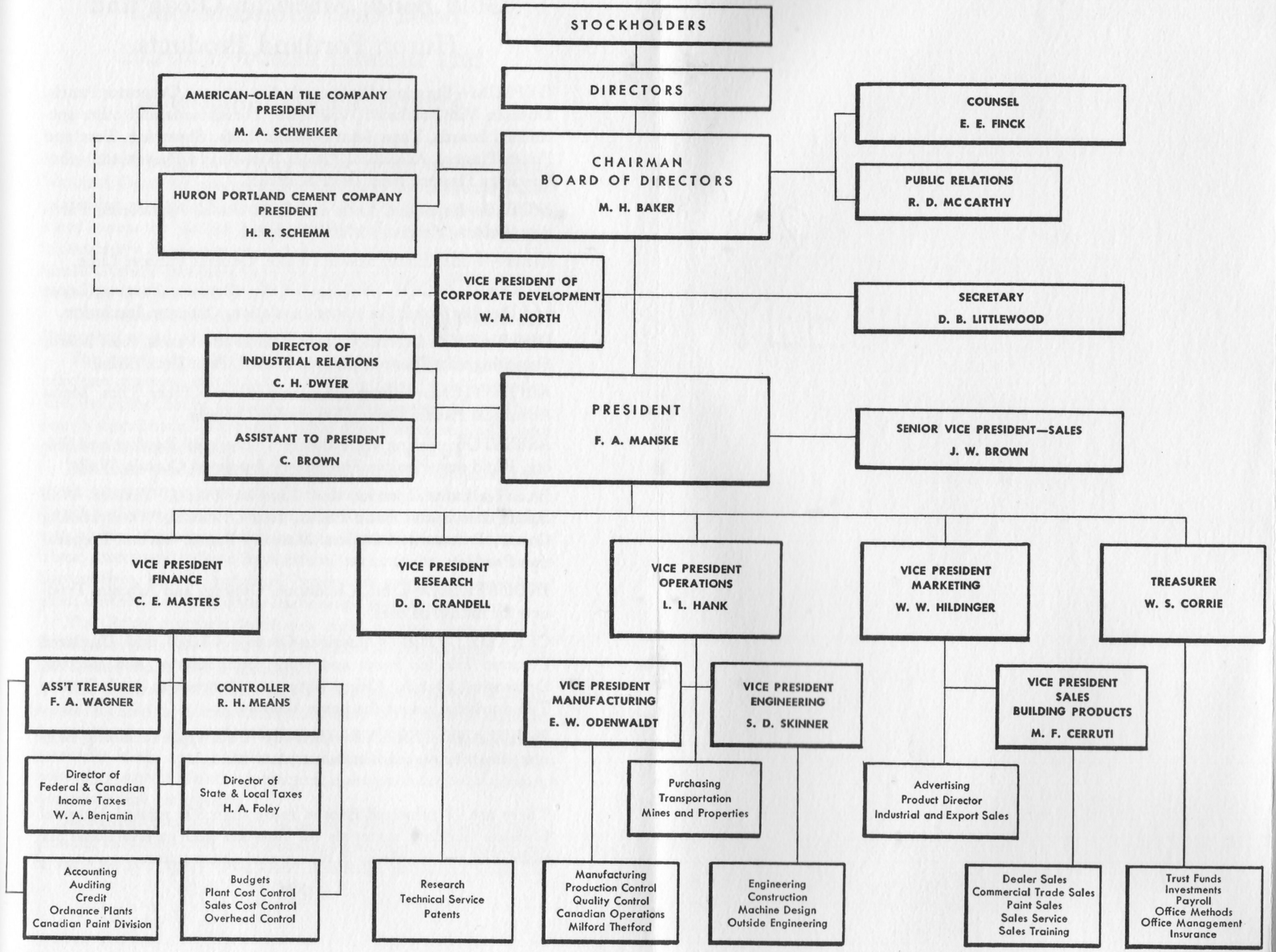
The vice president of research has responsibility for, and a complete knowledge of, the organization and operation of the National Gypsum Company Research Center.

The vice president of operations is responsible for operation of plant facilities, staffing all departments and the procurement and delivery of materials required to produce the Company's 11 basic product lines.

Sales, marketing and advertising plans and policies are the responsibilities of the vice president of marketing.

The National Gypsum Company organizational structure provides for close coordination and decentralizes the duties of the chief executive and president. Its strength lies in the fact that it utilizes the special talents of the executives to a high degree, but it also provides for such close cooperation that all Company management personnel have a thorough knowledge of the broad functioning of National Gypsum Company.

NATIONAL GYPSUM COMPANY CORPORATE ORGANIZATIONAL STRUCTURE



Corporate Organizational Structure

Gold Bond, American-Olean and Huron Portland Products

GYPSUM—Standard Wallboards, Grainboard Decorator Panels, Durasan Vinyl-surfaced Wallboard, Formboards and other specialized boards, Tape Joint Systems, Lath, Sheathing, Base and Finish Plasters, Acoustical Plaster, Fire-Shield Plaster and other Specialty Plasters, Roof Deck Mixtures.

METAL—Expanded Lath and Steel Studs, Accessories, Partition Systems, Specialty Metal Products.

LIME—Finish Lime, Mason's Lime, General Purpose Lime.

MINERAL WOOL INSULATION—Blankets; Pouring, Loose and Blowing Wool; Perimeter Insulation, Concrete Insulation.

INSULATION BOARD—Tiles, Planks and Panels, Roof Board, Sheathing, Hardboards, Shingle Backer, Roof Deck Slabs.

ACOUSTICAL—Wood Fiber and Mineral Fiber Tiles, Metal Acoustical Panels, Ceiling Suspension Systems.

ASBESTOS—Siding and Roofing, Corrugated Roofing and Siding, Rigid and Flexible Flat Sheets, Insulated Curtain Walls.

PAINT—Latex Interior and Exterior Paints, Texture Wall Paints, Porch and Patio Paints, Latex Enamel, Waterproofing Coater, Primers and Sealers, Masonry Paints, Surface Preparation Products.

INDUSTRIAL—Lime, Limestone, Gypsum and Asbestos Products for industrial uses.

CERAMIC TILE—(American-Olean)—Glazed and Unglazed Ceramic Tile for floors and walls, both interior and exterior, Decorative Murals, China Bathroom Accessories, and Quarry Tile marketed under the name Murray.

PORTLAND CEMENT—(Huron)—Four types including Regular, High Early, Air Entraining and Masonry.

* * *

There are 11 principal lines of more than 300 related National Gypsum building materials for interiors and exteriors and for walls, ceilings and floors in all types of construction.

Distribution of Gold Bond, Huron Portland Cement and American-Olean Products

Over 27,000 people in 49 states, and in Canada, last year bought National Gypsum's products. The Company has constructed and purchased plants until it now has a total of 60, strategically located across the United States and Canada. And the Company is constantly improving on distribution techniques to speed National Gypsum products to every corner of our country, and to maintain the good will of the consumer.

Distribution is divided into the following six categories: Dealer, Paint, Industrial, Commercial Trade, Cement and Ceramic Tile.

The more than 20,000 customers in the Dealer category purchase gypsum, metal lath, asbestos, mineral wool insulation and insulation board products. This is the largest of the Company's distribution categories. Gold Bond salesmen sell these products to retail lumber and building supply dealers.

The main products in the Industrial category are lime, limestone, gypsum ore and asbestos fiber. Last year, National Gypsum distributed these products to about 3,000 customers in every state east of the Mississippi River and in Texas, Kansas and Iowa. These customers include agricultural accounts as well as large corporations, but the principal buyers are the paper, metallurgical, carbide, cement, water and sewage treating industries.

The Paint category distributes eight general lines of Gold Bond paint products to about 3600 dealers and distributors across the United States and in Canada.

The Commercial Trade category has approximately 450 customers located in 44 states and plans have been made to add the remaining six states to the Gold Bond list of territories. Sales are generally made to subcontractors including partition erectors, poured gypsum roof deck contractors, corrugated asbestos erectors and acoustical contractors.

Acoustical tiles are major items in National Gypsum's ever-growing list of products. The Company grants exclusive franchises to sell, use and apply Gold Bond acoustical products in specific

geographical areas. There are 120 franchised Gold Bond Acoustical Contractors in 44 states and in Canada.

There are also 102 Company-approved roof deck contractors in 28 states. National Gypsum requires such approval to insure wide distribution through the relatively small number of roof deck contractors.

Six self-unloading cement ships carry Huron Portland Cement to 12 distribution terminals serving the major markets along the Great Lakes. The three Portland cements are Regular, High Early and Air Entraining. The company also markets a Masonry cement. These products are sold to about 2000 ready-mix cement plants, cement block and pipe plants, pre-stressed concrete structural plants, road builders and building supply dealers and others.

The Ceramic Tile category sells American-Olean and Murray products to about 2500 tile distributors and contractors in markets east of the Rockies. These products include glazed and unglazed ceramic tile for floors and walls, both interior and exterior; decorative murals and china bathroom accessories. Typical uses of Murray quarry tile include the construction of home patio flooring and dairy barns.

Through intelligent distribution, National Gypsum is able to specialize to achieve maximum efficiency and to provide salesmen, trained in the product, to give the appropriate services required by each trade group.

Key Staff Departments

Product Research

National Gypsum Company was created as a result of research which provided a lighter and stronger gypsum board. This new wallboard exceeded the quality of all other wallboards on the market. It was a major reason for the early success of the Company.

A few years later, management realized that the industry wanted a pre-decorated gypsum wallboard, and wood-grained wallboard was born in the National Gypsum laboratories. This is only one of myriad examples of how the Research Department has created new products to meet construction needs of the present and the future.

Gold Bond research began in a small room—a nursery, if you will. It was a healthy child and—at 35—is still vigorous and growing. From the beginning, the Gold Bond concept of industrial research has been that its paramount function is to "Look to the Future." It never was the stereotyped depository for the Company's day-to-day technical problems, which so many people misguidedly classify as research.

For that reason, National Gypsum's Research Department has always operated as an independent unit responsible directly to the president. This, in turn, is an important reason for the department's steady growth in ability to supply a constant stream of new products.

The Research Department has had to meet many sudden challenges such as the period from 1941 to 1947, when building for other than military needs was at a virtual standstill. During this period, the Company made many important war-effort products such as laminated gypsum roof deck which saved thousands of tons of precious steel. Other contributions to the war effort included the largest production by any company of airplane landing mats; vital knowledge to improve the production of pure magnesium by the Ferro Silicon process; Natacor, a combination of Asbestos-Cement and gypsum wallboard for ship bulkheads; an asbestos-surfaced mineral wool panel for fireproof insulation of ships and the development of a practical process for making aluminum without bauxite, in case overseas supplies were cut off.

When peace was finally won, the Company's research efforts were expanded. National Gypsum now has 15 times the number of men in research that it had at the end of World War II and the amount of money expended for research purposes has increased twenty-fold. Research facilities have mushroomed until now the Company has a modern, efficient $1.4 million Research Center at its disposal.

The results achieved by research have increased to a point where a dozen new products a year, not merely improvements, are considered only as a temporary standard which must be improved upon.

The list of new products, developed recently by research, includes Durasan Vinyl-coated wallboards, Fire-Shield Plaster, deep-textured Asbestos-Cement sidings, colored plastic-coated Asbestos-Cement sidings, corrugated Asbestos-Cement bulkheads, Asbestos Soffit panels, Hydro-Check paints, Semi-Gloss Velvet paint, concrete slab insulation, Twinsulation, Acoustiroc, Quilted Overtone Grid Panels and many others.

Truly, the founders' concept of "Research is for the Future," has paid dividends to National Gypsum employees, stockholders, dealers and to the public and in fact to the entire construction industry.

Procurement

Purchases during the first year of National Gypsum's life were modest compared with today's activities. Gypsum liner was purchased from nearby paperboard mills along with one or two chemicals for the manufacture of gypsum wallboard. Small quantities of burlap sacks were purchased in which to package and ship plaster.

A young salesman for a local bag-making firm sold the Company its first carload of burlap bags. He continued selling to National Gypsum as it expanded and made the transition from burlap to paper sacks. Although this salesman's responsibilities increased and he became a district sales manager, he continued to handle the National Gypsum account because of a personal acquaintance with and affection for the Company's founders. This relation was maintained until his retirement three years ago.

Electrical equipment for the original plant came from a supplier who is still the Company's main source for this type of equipment. The special machine for making gypsum wallboard at the first plant came from a machine shop operator whose heirs still supply National Gypsum. Although the Company now buys gypsum linerboard only under unusual circumstances, the original suppliers are very good friends of the Company.

As the Company prospered and expanded, the Purchasing Department's responsibilities increased. Today, purchasing decisions, involving hundreds of thousands of dollars, are matters of everyday business.

During 1959, National Gypsum spent over $40,000,000 for materials and supplies consumed in producing Gold Bond building products. Millions were spent just for electricity and over $4,000,000 was spent for repair parts to keep a vast array of machinery and equipment in top condition. The construction of new plants, and additions to others, have required the expenditure of many more millions.

During the Company's first year, buying was done by anyone who could find time. The volume of purchasing is now such that it requires 28 people in the Buffalo headquarters and 18 buyers at various plants.

An interesting item handled by the Purchasing Department is waste paper, which the Company's paper mills convert into gypsum board liner. National Gypsum uses over 250,000 tons of waste paper annually. The waste paper industry recognizes over 40 classifications of waste paper grades, of which National Gypsum buys about 20 classifications.

The Company's bag purchases, which started out as two or three thousand burlap bags every month, have reached the staggering figure of about 3,000,000 paper sacks each month.

Most of the Company's purchased raw materials come from sources in this country, but foreign countries are also important suppliers. Large quantities of casein and cow hoof meal are imported from the Argentine and certain types of asbestos fibers from South Africa.

The intelligent planning behind the Purchasing Department has made it one of the efficient units in National Gypsum Company.

Transportation

When the first carload of gypsum products was shipped from the Clarence Center plant, the movement was handled by the Order Department. In 1933, the Company shipped 4,300 carloads of products compared with more than 200,000 car and truck loads in 1959.

With the addition of the Niles plant in 1934, it became necessary to divide the functions of "Orders" and "Traffic." The Traffic Department was the forerunner of the present Transportation Department.

The Transportation Department originally had a single purpose—to see that National Gypsum products moved at the lowest possible cost commensurate with good service. When sales increased and the work load became heavier, the department was divided into two divisions—"Rates" and "Service."

Cost reductions are the responsibility of the Rate Division. Transportation costs constitute about 20 per cent of the delivered price of National Gypsum products and a dollar saved on transportation equals five dollars of profit. Constant analysis of freight rates is necessary to keep the annual freight bill proportional to sales, and to reduce it whenever possible.

The Service Division's job is to move the Company's goods to market as quickly and as efficiently as possible. This begins by assuring that all plants are adequately supplied with freight cars and trucks, that the most efficient routing is employed and that the customers' purchases arrive in good condition.

When National Gypsum purchased Universal Gypsum and Lime Company in 1935, operations expanded from four to nine plants.

The purchase of the Atlantic Gypsum Company in 1936 brought New York City and Portsmouth, N. H. into the Company's domain, and with them came marine operations. Gypsum rock was brought to these seaboard plants from Nova Scotia by chartered ships. Since New York produced only plaster, it was supplied with board and lath from the Portsmouth plant.

After World War II, the addition of the Baltimore plant and expansion at Savannah necessitated the establishment of a Marine Division. Three Canadian "Liberty" ships were purchased and

used until 1955. Shortly thereafter, National Gypsum completed "year-round" shipping installations in Nova Scotia and acquisition of the new Company fleet began.

The Company began to use trucks in 1934 to remain in a competitive sales position. This activity kept pace with Company growth until the gasoline and tire shortages of World War II. Release of these commodities at the end of the war resulted in vigorous growth in highway transportation and the establishment of a Truck Division.

To price products properly, National Gypsum needed a fantastic number of freight rates in a readily understandable form. The bulletin section, established in 1948, accomplished this job. There are now over 380 rate bulletins, containing 600,000 individual rates.

In 1953, the Materials Handling Division was created to help plants and dealers reduce handling costs and eliminate damage to goods in transit or storage.

During the past 35 years, the Transportation Department has been constantly affected by the changing pattern of transportation. Trucks, hardly thought of in the late '20s, now handle 30 per cent of all National Gypsum products. Boxcars, formerly the standard carriers of gypsum products, are being rapidly replaced by the bulkhead flat car which now handles 25 per cent of the Company's plant carloadings. Trailers-on-flat-cars are engaged whenever practical.

All these changes, and more, demand the constant attention of Transportation Department personnel—and there is no guarantee the future will be less exacting.

Engineering

The Engineering Department has always been an integral cog in Company operations. Its job has been to design and build new plants, provide additions, keep facilities up-to-date by creating new machines and provide mechanical changes to accommodate new processes.

Experiencing the same rapid growth as the Company, the Engineering Department has increased from an original staff of four men until it now has 54 full-time employees including

electrical, mechanical, steam, electronics and structural engineers as well as designers.

One of the most notable accomplishments of the Engineering Department has been the development of a revolutionary new calcining method for gypsum. This invention is producing more uniform plaster of Paris at lower cost. A new process machine for making ceiling tile from rock wool, controlling elements to support the highest speed board machine ever built and many other conceptions, which have given the Company modern production facilities, are among Engineering's other accomplishments.

National Gypsum has grown from a one-plant operation to a multi-million-dollar building materials manufacturer with a total of 60 plants strategically located across the United States and Canada. The following list provides a graphic representation of the scope for activity in Engineering since the Company's beginning in 1925.

35-Year Pattern of Growth in Plant Facilities

Year Built or Purchased	*Location*	*Product*
1926	Clarence Center, N. Y.	Gypsum
1927	National City, Mich.	Gypsum
1934	Niles, O.	Metal Lath
1935	Akron, N. Y.	Gypsum
1935	Fort Dodge, Ia.	Gypsum
1935	Rotan, Tex.	Gypsum
1935	York, Pa.	Lime
1936	New York, N. Y.	Gypsum
1936	Portsmouth, N. H.	Gypsum
1938	Medicine Lodge, Kan.	Gypsum
1938	Mobile, Ala.	Insul. Bd.
1939	Savannah, Ga.	Gypsum
1940	Newburgh, N. Y.	Paper
1940	Bellefonte, Pa.	Lime
1941	Alexandria, Ind.	Mineral Wool
1941	Dover, N. J.	Mineral Wool
1944	Kimballton, Va.	Lime
1946	Garwood, N. J.	Paper
1947	Baltimore, Md.	Gypsum
1947	Kalamazoo, Mich.	Paper
1951	Gibsonburg, O.	Lime
1951	Pryor, Okla.	Paper
1952	Good Hope, La.	Paint
1952	Matteson, Ill.	Paint
1952	Montreal, Que.	Paint
1953	New Orleans, La.	Asbestos
1953	St. Louis, Mo.	Asbestos
1953	Millington, N. J.	Asbestos
1954	Shoals, Ind.	Gypsum
1955	Halifax, N. S.	Gypsum
1956	Westwego, La.	Gypsum
1956	Burlington, N. J.	Gypsum
1956	Raritan, N. J.	Paint
1956	Anniston, Ala.	Paper
1957	New Haven, Conn.	Gypsum
1958	Thetford Mines, Que.	Asbestos
1958	Tawas, Mich.	Gypsum
1958	Lansdale, Pa.	Ceramic Tile
1958	Greensboro, N. C.	Pyrophyllite
1958	Glendon, N. C.	Pyrophyllite
1958	St. John's, Newf.	Pyrophyllite
1959	Waukegan, Ill.	Gypsum
1959	Olean, N. Y.	Ceramic Tile
1959	Cloverport, Ky.	Ceramic Tile
1959	Lewisport, Ky.	Ceramic Tile
1959	Alpena, Mich.	Cement
1959	Buffalo, N. Y.	Cement
1959	Cleveland, O.	Cement
1959	Detroit, Mich.	Cement
1959	Duluth, Minn.	Cement
1959	Green Bay, Wisc.	Cement
1959	Milwaukee, Wisc.	Cement
1959	Muskegon, Mich.	Cement
1959	Oswego, N. Y.	Cement
1959	Saginaw, Mich.	Cement
1959	St. Joseph, Mich.	Cement
1959	Superior, Wisc.	Cement
1959	Toledo, O.	Cement
1960	Lorain, O.	Gypsum
1960	Phoenix, Ariz.	Gypsum
	—Tampa, Fla.*	Gypsum

*Under Construction

Advertising and Sales Promotion Department

"*Why 69 Experts Say OK to This*" was the headline of the first advertisement scheduled by National Gypsum Company in The Saturday Evening Post on March 17, 1928. The two-page ad contained the pictures of 69 of the first dealers ever to handle Gold Bond wallboard. The ad went on to tell about a new and improved gypsum wallboard that had greater strength, that eliminated nail splitting and that weighed less per square foot.

Thirty-two years later, Gold Bond ads are still appearing in The Saturday Evening Post, as well as in Life, Better Homes and Gardens and many other leading magazines. Some of these ads still feature our customers such as a current series picturing over 140 leading builders. And the ads continue to tell people about the advantages of Gold Bond building products.

In between the original ad in 1928 and the ads now appearing, National Gypsum Company has spent in excess of $35,000,000 building a corporate and brand image with the American consuming public and the various trade factors with whom the Company does business.

From the very beginning, Gold Bond advertising was sales oriented. Very little of it is what might be called pure institutional advertising. Almost all of it is tied in with some sort of aggressive sales activity. Our advertising has always been planned with the ultimate sale in mind and that is why a large percentage of it goes into sales promotional materials—tools to help the salesmen close the orders, such as displays, product demonstrators, direct mail campaigns, product samples, technical literature and brochures.

Early in 1958, the Company inaugurated a series of trade advertisements which spelled out the dynamic sales philosophy of National Gypsum Company. These ads told dealers, builders, contractors and architects about new, exciting and exclusive Gold Bond building products; about unique services but most of all about Gold Bond's progressive philosophy as contained in the slogan "*A Step Ahead of Tomorrow.*"

As the Company entered the competitive 1960s, Gold Bond advertising was tightened and sharpened to fit into an accelerated over-all sales program.

National Gypsum Company
Employee Benefits

The management of National Gypsum Company has always realized that the Company is its employees. Consequently, every effort has been made to provide employee benefits equal to or, in most cases, greater than any in the industry. The number and quality of these benefits are major factors in maintaining National Gypsum's extremely low employee-turnover rate.

Some of the many benefits of being a National Gypsum employee are:

(1) A BROAD PROTECTION PROGRAM is provided for employees in case of accident, sickness or death. The employees receive this protection at a greatly reduced rate since the Company shares the cost with each employee on a 50-50 basis. Under this program, every employee receives the following protection:

(A) *Group life insurance* amounting to at least one year's straight-time pay.

(B) *Weekly payments* up to 26 weeks if absent because of accident or sickness.

(C) *Hospital and surgical benefits* for the employee and the employee's dependents.

(D) *Maternity benefits* for female employees and wives of employees.

(E) *Cash payment in the event of accidental death or dismemberment* resulting from either an on- or off-job accident or sickness.

(F) *Catastrophe coverage* for certain expenses running as high as $10,000.

(2) THE NATIONAL GYPSUM COMPANY EMPLOYEES' STOCK PURCHASE PLAN offers employees the opportunity to invest in their Company, with National Gypsum making an additional contribution of at least 15 per cent to each employee's stock investment.

The plan was amended September 1, 1959 to provide for an increase of one-half per cent in the Company's contribution for each full period of continuous participation in the plan by an employee.

The 2900 National Gypsum employees in the stock purchase plan invest more than $1 million annually to purchase about 20,000 shares of common stock. The attractiveness of the plan is further evidenced by the fact that 10 per cent of the Company's stockholders are employees.

(3) COMPANY PUBLICATIONS keep employees well-informed of the workings of their Company. The publications include *The National Gypsum News*, *What's New at National*, *Public Relations News Bulletin* and *The Gold Bond Line*.

(4) A POLICY OF PROMOTING FROM WITHIN is adhered to whenever possible.

(5) SCALED REIMBURSEMENTS are paid to employees for approved educational training which is reasonably related to their jobs.

(6) PAID VACATIONS are accorded all employees.

(7) ADDITIONAL VACATION TIME AND OTHER BENEFITS are accorded employees with 15 or more years of service.

(8) A CONTINUING SAFETY PROGRAM is emphasized. The Company has one of the best safety records in the industry and is always searching for new ways to protect employees. Modern first aid equipment and trained first aid attendants are vital parts of every National Gypsum installation.

(9) BONUSES are paid, generally at the end of each six-month period, to all salesmen, assistant district managers, district managers and division managers who have met or exceeded assigned product quotas. This incentive program provides employees with an opportunity to substantially augment their incomes.

Bonuses are awarded annually to plant managers and other key plant personnel on the basis of several factors including cost savings, improvement of quality, safety, managerial efficiency and effectiveness of communications.

(10) A GENEROUS RETIREMENT PLAN was inaugurated almost 20 years ago and has been improved through the years. The annual cost of this plan, including provisions for funding past service costs, is in the neighborhood of $1.5 million of which the Company contributes about two-thirds. The number of people receiving these benefits has increased from nine in 1950 to more than 150 today.

(11) MONEY AWARDS are made to employees for suggestions accepted by The Gold Bond Idea Bank.

(12) RECREATIONAL AND SOCIAL ACTIVITIES are sponsored and encouraged by the Company.

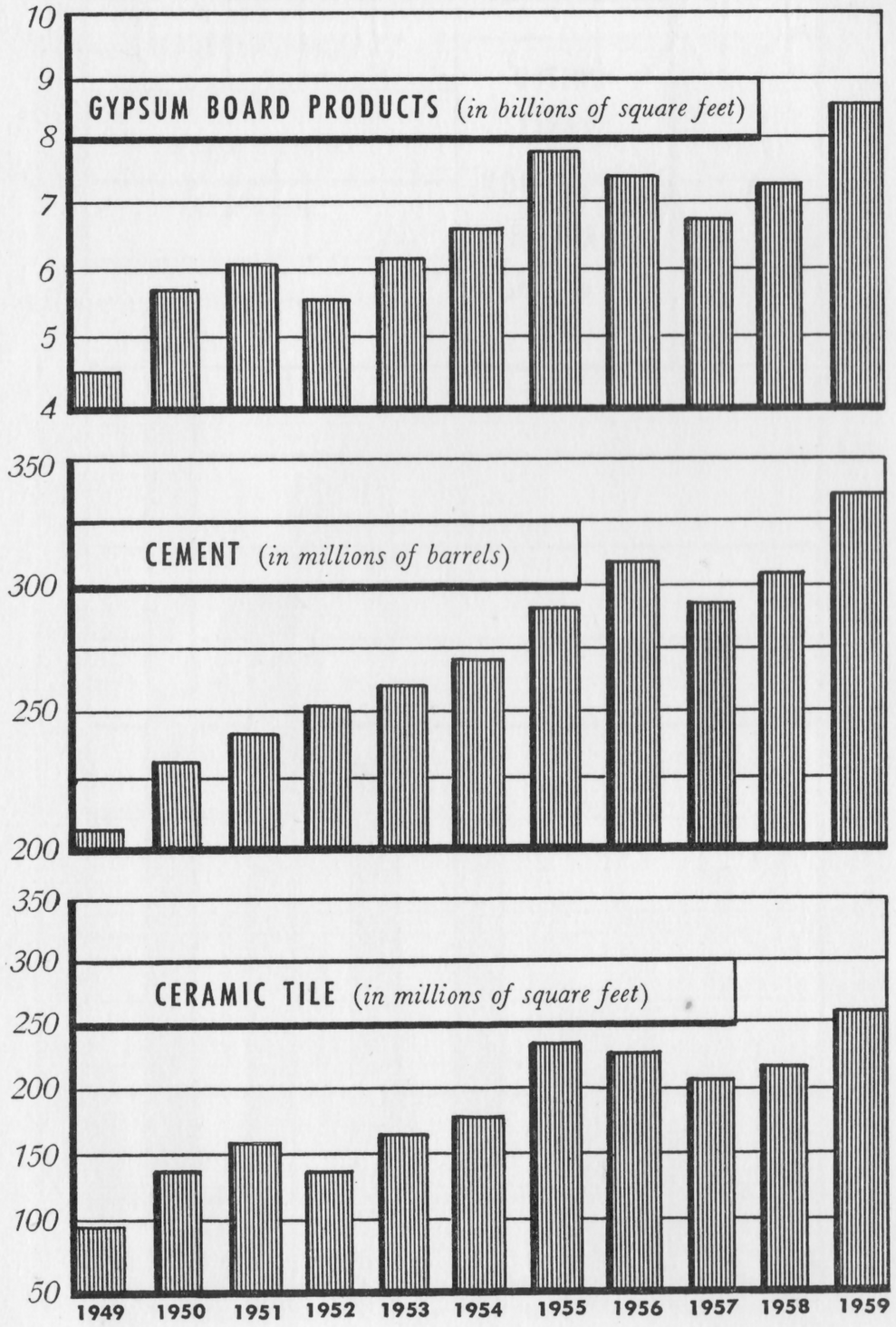
(13) A DISCOUNT on the purchase price of National Gypsum and its subsidiaries' products is offered, if the merchandise is for personal use.

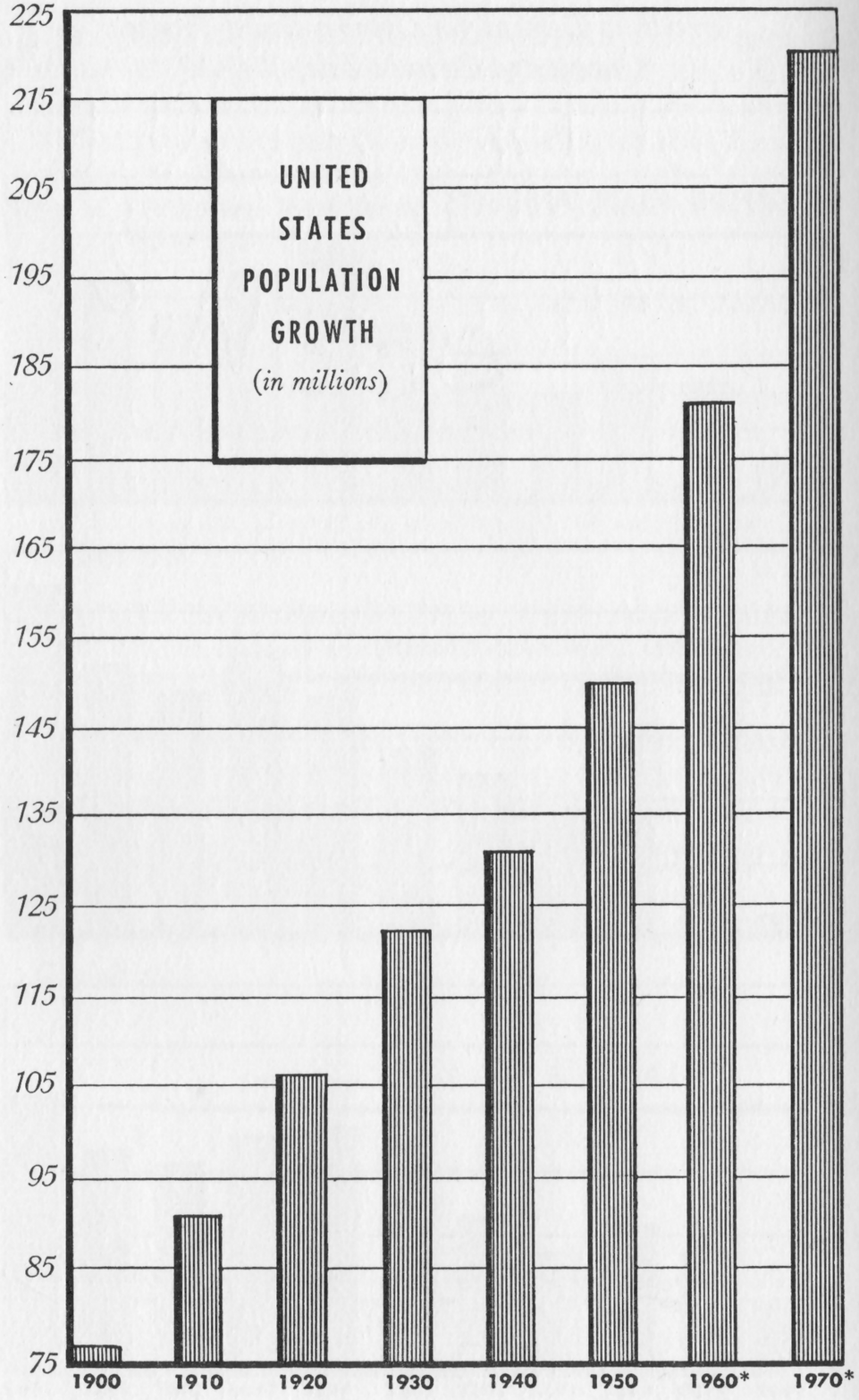
(14) THE NATIONAL GYPSUM EMPLOYEES' CREDIT UNION is an independent organization owned and operated by employees to promote thrift and facilitate loans to members.

(15) COMPANY AUTOMOBILES are furnished to salesmen. If a salesman elects to drive a private car, the Company reimburses him according to the appropriate rate tables. Since the Company's beginning in 1925, transportation provisions have always been made for salesmen.

(16) PAYROLL DEDUCTION PLANS are provided by the Company.

Growth in Demand for Gypsum Board Products, Cement and Ceramic Tile, 1949-59




UNITED STATES POPULATION GROWTH
(in millions)
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215
205
195
185
175
165
155
145
135
125
115
105
95
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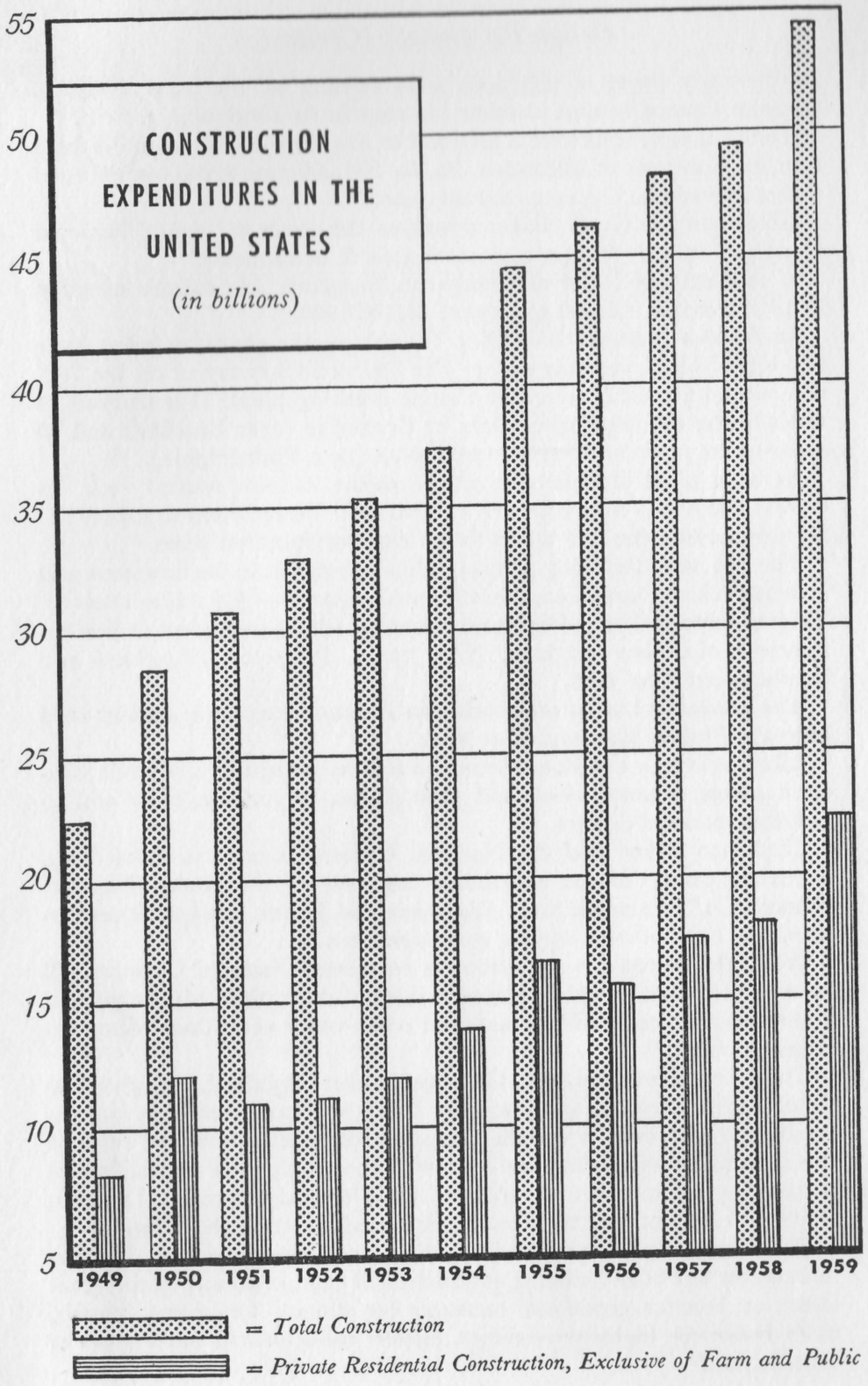
1900
1910
1920
1930
1940
1950
1960*
1970*

*Estimated


CONSTRUCTION EXPENDITURES IN THE UNITED STATES
(in billions)
55
50
45
40
35
30
25
20
15
10
5
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
= Total Construction
= Private Residential Construction, Exclusive of Farm and Public

As the early pages of this book were coming off the press, National Gypsum Company took another big step in its continuing growth.

The Company approved a proposal to acquire the Allentown Portland Cement Company of Allentown, Pa. for 584,289 authorized but unissued shares of National Gypsum common stock.

Chairman Melvin H. Baker described the move as "one of National Gypsum Company's most important growth investments."

A well-managed and efficiently-run company, Allentown's earnings in 1959 were $2,561,000 on sales of $13,507,000.

In Eastern Pennsylvania (Oley Township), the company owns huge deposits of high-grade limestone. The limestone is quarried on the 700-acre site and crushed there in a stone crushing plant. It is trucked 14 miles to the manufacturing plant at Evansville (near Reading) and 35 miles to the plant at West Conshohocken (near Philadelphia).

At each plant site the company quarries its own cement rock. Its proven reserves of limestone and cement rock are sufficient to supply the requirements of the two plants for at least one hundred years.

The two manufacturing plants produce cement from the limestone and cement rock and have a combined annual capacity of 4½ million barrels. They supply a full line of Portland cement products to markets in Eastern Pennsylvania, New England, New Jersey, Delaware, Maryland and Southeastern New York.

The company has its main office in Allentown and has district sales offices in Philadelphia and New York.

Like the Huron Division, Allentown sells its cement to ready-mix concrete plants, cement block and pipe plants, to road builders and to building material dealers.

Chairman Baker said the National Gypsum expansion move "is a logical follow-up to our acquisition last year of the Huron Portland Cement Co." He noted that Allentown and Huron market cement in adjoining but not over-lapping geographic areas.

When the Allentown acquisition is completed National Gypsum will have cement distribution in almost a third of the nation. Mr. Baker said "other cement mills will be acquired when other exceptional opportunities are found."

The Allentown acquisition Chairman Baker explained, will give National's sales, earnings and assets big boosts and bring valuable and extensive mineral reserves into the Company fold. He also pointed out how the acquisition will substantially enlarge the Company's second largest division by adding two big mills to the Company's present 13-plant, seven-ship cement mining, manufacturing and distribution network.

The founder forecast that "the market for Portland cement, like the markets for our other building products, will expand greatly in the years ahead as America grows and increases her demand for homes, schools, office buildings, highways, bridges, airport runways and other types of construction."